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MENTAL HYGIENE

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BODY AND MIND *

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YOU will not be surprised to hear that when your president, Dr. Lambert, did me the honor to ask me to address you this evening, my thoughts turned to the general theme of the relations of philosophy and medicine before settling on a special topic. My mind was thus led to recall the beginning of both of them in Greece, and to the fact that there was a time when philosophy, science, and the arts, medicine included, were much closer together than they have been since. For both philosophy and the sciences were conceived and begotten of the arts. It was once their aspiration to find their issue in arts—the sciences in arts of the special branches of life and philosophy in the comprehensive art of the wise conduct of life as a whole.

There is a contemporary philosophic movement, popularly known as pragmatism, which, discontented with the current separation of theory and practice, knowledge and action, regards thought and the beliefs that proceed from it as themselves modes of action and strives to envisage them in their directive office in conduct. This movement is often regarded as a heresy, indeed as a novel and peculiarly American heresy indicative of an insensate love of keeping busy no matter how. But in truth it marks a return to the idea of philosophy which prevailed when reflective thought was young and lusty, eager to engage in combat in the public arena, instead of living a sheltered and protected life. In those days science and phil-

* Read at the Eighty-first Anniversary Meeting of the New York Academy of Medicine, November 17, 1927.

osophy had not parted ways because neither of them was cut loose from the arts. One word designated both science and art: Τέχνη. The desire was to command practices that were rational and a reason embodied in practice. During the almost countless ages of prior human history, men had pursued the arts thoughtlessly, relying upon the bare accumulation of accidental successes, without paying heed to causes and reasons. In consequence, the arts were routines devoted to separate ends and meeting only in a common medium of magic and supernatural belief.

The Greeks define an epoch in the history of civilization because they turned back to examine these routines and accidents and made it their business to discover the principles that underlay them in order that they might reincarnate them in a more intelligent pursuit of ends. In liberating the arts from routine and blind accumulation, they gave birth to science; in view of this achievement there arose the idea of an art of life based upon the most comprehensive insight into the relationships between condition and ends. Medicine was one of the first fruits of the scientific emancipation, and, since the Greeks recognized the necessity of a sound mind in a sound body for the conduct of life in its wholeness, medicine and philosophy were in close alliance.

The relevant facts are exhibited in the history of the school of Hippocrates. Philosophy appears in it as search for a whole which shall bind together a mass of otherwise disconnected details, while the spirit of science was operative in loving, patient, and prolonged search for facts and their significance. And the medical art was the use of the knowledge and insight thus attained. The union of these three things is seen in the school's glorification of Τέχνη: in its criticism of other schools of physicians for studying symptoms in isolation and multiplying diseases and remedies; in its emphasis upon prognosis, by which was meant not just a prediction of outcome, but a reconstruction of the entire course of a disease; in study of health and disease in relation to environment, climate, seasons and seasonal variations, air, water, and soil; while the oath of Hippocrates endures as evidence that human and social ties were included in the wide and searching vision. What at first sight may seem an attack upon mingling phil-

osophy and medicine turns out upon closer inspection to be an attack upon basing medicine upon a narrow philosophical foundation. For the school, borrowing from Heracleitus, Empedocles, and Pythagoras, insisted upon the measured harmony of all elements as the condition of maintaining and restoring health. As Hippocrates said: "We cannot understand the body without a knowledge of the whole of things." And again, speaking of epilepsy and other disorders regarded as sacred and hence treated by means of medical incantations, he said: "These maladies, like all other things, are divine, and yet no one thing is any more divine than another. For all things alike are divine and yet each one of them has its own natural being and proceeds from a natural cause."

We may indeed now smile at the crudeness of their philosophy and science and in view of this crudeness be led to deplore the connection of philosophy, science, and medical art. The disparagement of the union may readily become more pronounced when we consider the latter development of various medical schools, the dogmatic, empirical, methodistic, and pneumatistic, each allied with a particular school of philosophic thought. But objection is really directed against the crude state of knowledge and culture at the time, a state of which both philosophy and medicine were victims. The philosophic spirit at least kept alive the need for general principles and aided in preventing relapses into the earlier crude empiricism.

This introduction is overlong, and may indeed not seem to be at all an introduction to the special topic of the evening, the relations of body and mind. But it was in the course of such reflections that my mind was led to this topic as a fitting theme. For the conspicuous trait of the period in which science, philosophy, and the arts were closely connected was the sense of wholeness, while the very problem of mind and body suggests the disastrous effect of the divisions that have since grown up. For I do not know of anything so disastrously affected by the tradition of separation and isolation as is this particular theme of body-mind. In its discussion are reflected the splitting off from each other of religion, morals, and science, the divorce of philosophy from science and of both from the arts of conduct. The evils that we suffer

in education, in religion—for example, the fundamentalist attack upon the evolution of man rests upon the idea of complete separation of mind and body—in the materialism of business and the aloofness of “intellectuals” from life, the whole separation of knowledge and practice, testify to the necessity of seeing mind-body as an integral whole.

The division in question is so deep-seated that it has affected even our language. We have no word by which to name mind-body in a unified wholeness of operation. For if we said “human life”, few indeed would recognize that it is precisely this unity of mind and body in action to which we are referring. Consequently when we discuss the matter, when we talk of the relations of mind *and* body and endeavor to establish their unity in human conduct, we still speak of body *and* mind and thus unconsciously perpetuate the very division we are striving to deny. In this address, I shall make no attempt to consider all the various theories that have developed in discussing their relation—panpsychism, epiphenomenalism, preëstablished harmony, interactionism, parallelism, and so forth. I shall not even try to prove the unity of body and mind. I shall beg that question and devote the time to stating the nature of the unity and considering some of the causes that work against recognition of it.

I have used, in passing, the phrases “wholeness of operation”, “unity in action”. What is implied in them gives the key to the discussion. In just the degree in which action, behavior, is made central, the traditional barriers between mind and body break down and dissolve. Were this the fit time and place, it could be shown, I think, that the habit of regarding the mental and physical as separate things has its roots in regarding them as substances or processes instead of as functions and qualities of action. In contrast to such a notion, it is asserted that when we take the standpoint of human action, of life in operation, body presents itself as the mechanism, the instrumentality of behavior, and mind as its function, its fruit and consummation. To the interpretation of this statement our further remarks are given.

When we take the standpoint of action, we may still treat some functions as primarily physical and others as primarily mental. Thus we think of, say, digestion, reproduction, and

locomotion as conspicuously physical, while thinking, desiring, hoping, loving, fearing, are distinctively mental. Yet if we are wise, we shall not regard the difference as other than one of degree and emphasis. If we go beyond this point and draw a sharp line between them, consigning one set to body exclusively and the other to mind exclusively, we are at once confronted by undeniable facts. The being who eats and digests is also the one who at the same time is sorrowing and rejoicing; it is a commonplace that he eats and digests in one way to one effect when glad, and in another when sad. Eating is also a social act, and the emotional temper of the festal board enters into the alleged merely physical function of digestion. The eating of bread and drinking of wine have indeed become so integrated with the mental attitudes of multitudes of persons that they have assumed a sacramental spiritual aspect. There is no need to pursue this line of thought to other functions which are sometimes termed exclusively physical. The case of taking and assimilating food is typical. It is an act in which the means are physical while the quality of the act determined by its consequences is mental. The trouble is that, instead of taking the act in its entirety, we cite the multitude of relevant facts only as evidence of influence of mind on body and of body on mind, thus starting from and perpetuating the idea of their independence and separation even when dealing with their unity in action. What the facts testify to is not an influence exercised across and between two separate things, but a behavior so integrated that it is artificial to split it up into two things.

The more human mankind becomes, the more civilized it is, the less is there some behavior which is purely physical and some other purely mental. So true is this statement that we use the amount of distance that divides them in any society as a test of the lack of human development of that community. There exists in present society, especially in industry, a large amount of activity that is almost exclusively mechanical, that is carried on with a minimum of thought and of accompanying emotion. There is a large amount of activity, especially in "intellectual" and religious groups, in which the physical factor is at a minimum and what little there is is regretted

as a deplorable necessity. But each sort of behavior, in the degree of its one-sidedness, marks a degradation, a disastrous acquired habit whose formation is due to undesirable conditions; each marks an approximation to the pathological, a departure from that wholeness which is health. When behavior is reduced to a purely physical level and a person becomes like a part of the machine he operates, there is proof of social maladjustment. This is reflected in the disordered and defective habits of the persons who act on the merely physical plane. Likewise, action does not cease to be abnormal because it is said to be wholly spiritual and concerned with ideal matters too refined to be infected with gross matter. Nor is it enough that we should recognize the part played by brain and nervous system in making our highly intellectual and "spiritual" activities possible. It is equally important that we realize that the latter are truncated and tend toward abnormality in the degree that they do not even-tuate in employing and directing physical instrumentalities to effect material changes. Otherwise that which is called spiritual is in effect but indulgence in idle phantasy.

Thus the question of the integration of mind-body in action is the most practical of all questions we can ask of our civilization. It is not just a speculative question; it is a demand—a demand that the labor of multitudes now too predominantly physical in character shall be inspirited by purpose and emotion and informed by knowledge and understanding. It is a demand that what now pass for highly intellectual and spiritual functions shall be integrated with the ultimate conditions and means of all achievement—namely, the physical—and thereby accomplish something beyond themselves. Until this integration is effected in the only place where it can be carried out, in action itself, we shall continue to live in a society in which a soulless and heartless materialism is compensated for by soulful, but futile and unnatural, idealism and spiritualism. For materialism is not a theory, but a condition of action; it is that in which material and mechanical means are severed from the consequences which give them meaning and value. And spiritualistic idealism is not a theory, but a state of action—that in which ends are privately enjoyed in

isolation from means of execution and consequent public participation.

In insisting upon the need of viewing action in its integrated wholeness, the need of discriminating between different qualities due to modes of integration is emphasized, not slurred. We need to distinguish between action that is routine and action that is alive with purpose and desire; between that which is cold and, as we significantly say, inhuman and that which is warm and sympathetic; between that which marks a withdrawal from the conditions of the present and a retrogression to split-off conditions of the past and that which faces actualities; between that which is expansive and developing, because including what is new and varying, and that which applies only to the uniform and repetitious; between that which is bestial and that which is godlike in its humanity; between that which is spasmodic and centrifugal, dispersive and dissipating, and that which is centered and consecutive. Until we can make such distinctions and make them in a multitude of shades and degrees, we shall not be able to understand the conduct of individuals and, not understanding, shall not be able to help them in the management of their lives. Because of this lack education will be a guess in the dark, business a gamble in shifting about and circulating material commodities, and politics an intrigue in manipulation. What most stands in the way of our achieving a working technique for making such discriminations and employing them in guidance of the actions of those who stand in need of assistance is our habitual splitting up of the qualities of action into two disjoined sorts.

It is necessary, however, to be explicit upon what is meant by saying that within the unity of behavior body stands for the means and agencies of conduct, and mind for its incorporated fruits and consequences. The bodily phase of action may be approached and studied in two ways. We may take it in its connection with processes that are going on outside the body—the processes that it shares with inanimate things—or we may take it in connection with what it actually does and effects in the distinctively human medium. The first mode of approach views action in all its modes as a variegated com-

plex of physico-chemical interactions. This kind of study is more than legitimate; it is indispensable. If organic changes are regarded as something unique, cut off from and unlike in kind to those occurring in inanimate nature, we cannot understand them, and therefore cannot direct them so as to modify the manner of their taking place. Only when we identify them with events in inanimate nature does our knowledge in physics and chemistry become available for knowing them; only then do the appliances and techniques that we have developed for control of affairs outside the body become adaptable for use in dealing with what goes on within the body. As long as organic processes and changes were connected with any unique, non-physical force or principle, our knowledge of them was rudimentary and accidental. When they were seen to be shared with processes going on in inanimate nature, all that was discovered about the latter became an intellectual tool for systematic knowledge of vital process, and the apparatus and technics for directing physical nature were capable of utilization in hygienic, medical, and surgical treatment of bodily changes.

If this were the whole of the story, bodily action would be wholly assimilated to inorganic action and the inclusion of the body in a behavior that has mental quality would be impossible. The remainder of the story is that chemico-physical processes go on in ways and by interactions that have reference to the needs of the organism as a whole and thus take on psychical quality, and in human beings at least are in such connection with the social environment as confers upon them intellectual quality. Any notion that human action is identical with that of non-living things or with that of the "lower" animals is silly. It is contradicted by the fact that behavior is so organized in human beings as to have for its consequence all that we call civilization, culture, law, the arts both fine and industrial, language, morals, institutions, science itself. And by its fruits we know it. Organic processes are then seen to be the constituent means of a behavior that is endued with purpose and meaning, animate with affection, and informed by recollection and foresight. In the end, the bodily is but a name for the fact that wherever we have consequences, no matter how ideal, there are conditions and means. Materialism

does not consist of a full and frank recognition of this fact, but in the isolation of means and conditions from what they actually do.

We have spoken so much of action and behavior that it is needful that we should be explicitly aware of what these words signify. In particular it is indispensable to note that when we are dealing with human behavior, the word designates a kind of behavior in which outcomes of the past and an outlook on the future are incorporated—something longitudinal and not something cross-sectionally lateral. We may isolate a particular organic structure or process for study. In as far as we do so, we regard it as similar to arrangements and processes that are shared with inanimate things. But we cannot understand the organism until we have taken its history into account. We have to make sure whether we are studying an embryonic, an infantile, a mature, or a senescent form. We have to place the particular affair studied in a career of development. In dealing with a special chemical reaction—say that of hydrogen and oxygen in bringing water into existence—we may neglect past history. We select a brief segment for study because we are not concerned with the individuality of the molecules involved; it is enough that what happens is a specimen of something which recurs and is repeated in other situations independently of the individuality of just these molecules. This is precisely the omission we cannot make in studying any present phenomena exhibited in human behavior. A human being carries his past in his habitudes and habituations, and we can rightly observe and understand the latter only as we are aware of the history that is included within them. That the practitioner—physician, psychiatrist, or educator—is capable of dealing intelligently with the phenomena that confront him only when he knows something of their life history is a commonplace. And it is not just the life history of the particular symptom of disorder he needs to know, but the life history of the individual in whom it appears. It is equally a commonplace that the need of such knowledge of life history as a whole increases in the degree in which the mental phase of a disturbance is prominent.

Such facts point to what is signified when it is said that

human behavior is longitudinal, not just cross-sectional. It forms a history, an autobiography, not indeed written, but enacted. The import of this fact in relation to the mental phase of action should be evident. When it is neglected, any item of behavior is regarded as an immediate lateral cross section, and thus becomes purely mechanical and without intellectual and emotional quality. This is precisely what happens when a reflex or specific reaction to a specific stimulus is treated as the unit of behavior, and all other behavior is in consequence treated as a compound of such units. Since the simple reflex is devoid of emotional and intellectual quality, it then logically follows that mind is not a property of any behavior. It is a fiction or a meaningless by-product accompaniment, like the beauty of a rainbow with reference to a purely physical account of the refraction of light by vapor. To assert, then, that *conscious* behavior is a fiction is to draw a logical deduction from a premise, not to observe a fact. And since the fact of conscious behavior, of observing, analyzing, noting, reasoning, is involved in the whole undertaking, the absurdity of the conclusion shows the falsity of the premise. We know that the structures involved in reflexes are not, as a matter of fact, primitive and original. The converse is true, as both phylogeny and ontogeny prove. The beginning is with organic action in which the entire organism is involved, and the mechanism of reflexes is evolved as a specialized differentiation within an inclusive whole of behavior. The assumption that the nature of behavior is exemplified in a simple reflex is a typical case of the fallacy of neglecting development, historical career. In consequence an account of the mechanism of a particular moment of behavior is converted into an account of behavior itself and of behavior in its entirety. Only in this fashion is the rôle of the mental in action relegated to the realm of fiction.

The criticism may be broadened to take in the whole reduction of mental phenomena to the stimulus-response type as that reduction obtains in current psychological theory, even among those who do not call themselves behaviorists. There is no doubt that any item of behavior can be stated in terms of a response to a stimulus—just as it may be stated in terms

of cause-effect. But as the doctrine is usually employed, it omits to consider the one question that is scientifically and practically important—namely, how did an object or situation acquire the capacity to *be* a stimulus? For to be a stimulus in evoking a response is an additive property of physical things. The organism is constantly surrounded by indefinitely numerous conditions which affect it. If we regard them all as stimuli because they enter into causal interaction with the living creature in some way, we say in effect that the whole universe is stimulus and also response. Such a view clearly makes the theory worthless for purposes of *analysis*. We are trying to describe a particular mode of action and that implies that some special feature of the environment is so weighted as to operate as stimulus. Now what makes some physical thing or trait a stimulus is the condition of the whole organism at the time, its needs and the kind of behavior in which it is already engaged. And both of these things are longitudinal, historical; they include factors formed in previous life history. Any particular thing at any particular time is a stimulus, evoking an adaptive response and use, only in virtue of the enacted biography of the organism.

There is an attempt to recognize the importance of historical development in some forms of the stimulus-response theory. Present behavior is traced back to original "bonds" in the nervous system which are innate, or to behavior in the form of what are usually called instincts. Thus previous development is nominally taken into account. But such a recognition of the life history of living beings is nominal rather than real. An earlier cross section of behavior is postulated, back of which development is not traced and consequently the place of the lateral segment in action as a whole is left out. The theory is only a verbal restatement of the compounding-of-reflex-units theory; the only difference is that an "instinct", as a preformed "bond" of stimulus and reaction, is somewhat more extensive and complex than a reflex. But since it is not sufficiently complex and extensive to take in the needs, demands, and disposition of the organism as a whole, the basic fallacy remains the same.

The reference to stimuli proceeding from the environment

brings us in effect to the second way in which the account of behavior is rendered so partial and split off that its mental phase has either to be denied as a fiction or else regarded as mysterious and unnatural. For the stimulus-response theory as usually held cuts off the environment from behavior. It treats environment simply as an external occasion from which behavior proceeds. Behavior then becomes exclusively something going on inside the organism, an affair which is simply set off or initiated by the environment. In reality the environment is just as much comprised within behavior as are organic processes. Behavior is not just something that goes on *in* a surrounding medium. If it were, behavior could be studied and described as something which goes on in the organism or which goes forth out of it, in total neglect of environment, save the reference to some part of the latter as a touch-and-go stimulus. Behavior in fact is a continuous interaction in which environing as well as organic factors are included. This is true even of the functions we often regard as exclusively physiological. We do not just breathe; we breathe air. We do not just digest; we digest foodstuffs. We do not just move the legs and body; we walk on the ground and from one place to another so as to obtain a more favorable environment to be incorporated in subsequent behavior.

To describe the structures and processes of the organism in isolation, in their exclusive reference to organic structures, and call the result an account of behavior is to omit the most distinctive character of behavior. Sherrington's classic work, *The Integrative Action of the Nervous System*, marks an epoch in the development of science. What is it that the action of the nervous system integrates? Simply its own, turning upon itself as a snake is said to swallow its tail? Clearly not, but the behavior of the entire organism of which it is a part. But when and how is the action of the organism integrated? There can be but one answer. It is integrated in the degree that it utilizes and transforms its environment by means of incorporating some elements of the latter within behavior. Utilization here signifies that something in the surroundings is rendered a means in the carrying on of some phase of behavior, as assimilation of food and the breathing

of air maintain life behavior itself. Transformation signifies that some part of surrounding conditions is actually changed so that the environment is modified into a form more favorable than before to the maintenance of life behavior. To describe the action of a part of the nervous system in isolation, or of the entire nervous system, or of the entire organism in isolation from the environment included within behavior is like thinking that we can understand a machine, say a loom, if we omit the material, the yarn, upon which it works and the transformation of the material into cloth wrought in the operation. Since the mental, if it can be found anywhere, must be found in behavior that comprises *objects* of desire, thought, and affection, to accept the premises that identifies behavior with the action going on in the organism apart from objects is to commit ourselves to denial of mental quality to action as a dialectical conclusion from the premise. Many persons will remain so assured that mental phenomena are actual facts that they will then prefer to go on believing in them, and will treat them as proofs of a mysterious something or substance called mind, soul, or consciousness. Thus the one-sidedness of the theory about behavior perpetuates the very tradition which a complete account of behavior would eliminate.

The bearing of the one-sided omission of environmental relations in description of behavior upon the reality of the truly mental phase of behavior is most evident when we consider the elimination of the human or social environment. For it is the incorporation of this environment in action that is most intimately and extensively connected with the intellectual and emotional quality of behavior. The question of the rôle of language and other constructed signs in mind gives a crucial test. I do not question the connection of thinking with speech and other signs. And speech and the use of signs is an affair of behavior. What is questionable is the elimination of relations with other human beings from the account given of thinking in terms of language habits conceived as "exercised implicitly behind the closed doors of the lips"—in other words, as something which goes on subcutaneously, wholly inside the organism. Such a description reduces speech to

vocalization or the making of sounds and thinking to an implicit exercise of the organs of vocalization and other internal structures. Now the making of sounds is not speech. Sounds issuing from vocalization are speech only when they are used to institute a mode of behavior on the part of another human being which will favorably affect the behavior of the one speaking. Sounds issue from phonograph or radio, sounds that imitate articulate speech. The phonograph does not speak, however. For while the sounds that issue may induce action on the part of others, anticipation of such action does not enter as a factor in its putting forth of sounds. Any modification of the behavior of others that is effected by the sounds emitted by the radio is not incorporated as a factor in the behavior. Precisely such inclusion of objective social consequences is what transforms the making of sounds into speech or language, as may be seen from taking any simple case of command, request, or advice. Speech is primarily a mode of action by which the behavior of one is so influenced by the expected or hoped for behavior of others as to become an integral part of concerted action.

Thinking as implicit speech is made on the same pattern. It represents the social situation carried over into the habits of the organism. One talks to himself as a way of anticipating objective consequences—that is, consequences into which the environment enters—before they happen and as a means of eventually securing those that are liked and of averting or avoiding those that are disliked. This renders behavior intelligent, thoughtful. It is all to the good when “consciousness” is thrown overboard as a substance or separate process designated by a noun; for “ness” indicates that the noun is abstract and results from projecting a quality into a thing in itself. But the quality of being conscious remains; the difference between behavior aware of what it is about and routine or impulsive behavior is as marked a factual difference as we can anywhere discover. To deny the reality of meaning as something mysterious and unnatural, outside of connection with the range of interactions that form behavior, is to the good. But refusal to admit meaning as a quality of behavior is another matter, and one that confutes itself. For the pro-

pounders of the doctrine that meaning is nonexistent address words on that subject to others; they expect their language to be understood and not taken as a nonsensical farrago; they anticipate certain consequences in the way of modified behavior to result from understanding and their language-behavior is modified by this expectation of response. They take it for granted that some behavior has meaning; and this cannot be granted without implying that some behavior—their own, for example, in the observations and analyses whose conclusion they present—is conscious; that is, is aware of what it is about, of what it is doing and trying to do. The conception of behavior in its integrity, as including a history and environment, is the alternative to a theory that eliminates the mental because it considers only the behavior of the mechanism of action, as well as the theory that thinks it ennobles the mental by placing it in an isolated realm.

Thus we are reminded of our beginning; we recall happier days when the divorce of knowledge and action, theory and practice, had not been decreed, and when the arts, as action informed by knowledge, were not looked down upon in invidious disparagement with contemplation complete in itself; when knowledge and reason were not so "pure" that they were defiled by entering into the wider connections of an action that accomplishes something, because it uses physical means. There are signs that we are, perforce, because of the extension of knowledge on one side and the demands of practice on the other, about to attempt a similar achievement on our own account. I close by suggesting the imperative need of such an integration in the art of education, an integration which can become real only as the scientific man, the philosopher, the physician and psychiatrist coöperate.

The art of education is one in which every person is compelled, whether he will or not, to take an interest, because it so intimately concerns his own conduct. A person may begin with a narrow interest—one that cares only about, say, the education of his own children or of members of his own profession. But he does not go far before he is forced to note that he is building on a sandy foundation because of deficiencies due to earlier education. Professional education has

its results limited and twisted because of the general state of education. From a survey of that, it appears that its improvement cannot be made secure merely by better training of teachers. Parents, school officials, taxpayers have the last word, and the character of that word is dependent upon their education. They may and do block or deflect the best laid plans. That is the circle in which education moves. Those who received education are those who give it; habits already engendered deeply influence its course. It is as if no one could be educated in the full sense until every one is developed beyond the reach of prejudice, stupidity, and apathy.

There is no possibility of complete escape from this circle. Education returns upon itself in such a multitude of ways as to render out of the question any short-cut solution. It is a matter of accelerating momentum in the right direction, and of increasing the effective energy within the movement of the factors that make for removing obstacles. Chief among these obstacles are the practices that are associated with the traditional separation of mind and body, and the consequent neglect of informed and intelligent action as the aim of all educational development. The division has affected every subject of study, every method of instruction and discipline. More than anything else it explains the separation of theory and practice, of thought and action. The result is a so-called cultural education which tends to be academic and pedantic, in any case aloof from the concerns of life, and an industrial and manual education which at best gives command of tools and means without intelligent grasp of purposes and ends. The consequences of this divided education are writ large in the state of our civilization. The physician meets them in a wide range of induced disorders, to say nothing of waste and incapacitation. The walls that mark the separation are beginning to crack, although they are far from crumbling. On all sides the artificiality of isolating from each other mind and body are beginning to be seen. There is at least the beginning of coöperation between those who are traditionally occupied with the concern of mind and those busy with the affairs of the body. The planning of any good school building is an illustrative symbol. Architect, engineer, hygienist,

teacher, and public official may join forces. But there are still many who should have a say, like the psychologist, who are left out, and such coöperation as there is lacks balance. It would be interesting, for example, to know what physicians—if they were consulted and if they thought their voice would be heeded—would say to the wisdom of the herding together of thousands of children in our gigantic buildings, with the enforced need of dealing with the children *en masse* and the institution of lockstep methods. The growing interest in pre-school education, nursery schools, and parental education, the development of medical inspection, the impact of social hygiene, the institution of school visitors, and the use of schools as social centers are other evidences that the isolation of schools from life is beginning to give way because of coöperative action. But not even the most optimistic would hold that we have advanced beyond the outer breastworks. The forces are still powerful that make for centrifugal and divisive education. And the chief of these is, let it be repeated, that separation of mind and body which is incarnated in religion, morals, and business as well as in science and philosophy. The full realization of the integration of mind and body in action waits upon the reunion of philosophy and science in art, above all in the supreme art, the art of education.

SCHOOLROOM HAZARDS TO THE MENTAL HEALTH OF CHILDREN

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NOT all is well with the school child of to-day. There are hazards that threaten his mental health, and these hazards certainly are on the increase.

In industry and commerce speed has been the major measure of efficiency. So also has speed become the measure of schoolroom progress.

When the psychologist began to use objective measures of achievement in the school about twenty years ago, he discovered that time was a factor easily controlled in the measuring process, that rate of achievement told a rather eloquent story about the immediate product of the school. He found, for example, that in mechanical learning, those who responded most quickly were, as a rule, most accurate. He proceeded, therefore, to work out tests which were given to school children in large numbers. The average time it took these pupils to do the given task was set as the standard time for all groups of children. Comparisons thereupon began between school systems and between schools within given systems, until to-day schools and teachers are rated largely on the speed with which their pupils can perform on certain standard tests.

Obviously some of the results of this procedure have been good. For one thing, the school expert and the teacher have information more definite than any hitherto available about what average children are achieving. But in the effort to bring the pupil up to the required standard, certain pernicious practices have developed. School experts and teachers have come to assume that the way to get speed in the performance of school work is to force the child to hurry. So the stop watch has been seized upon as the magic instrument. School supervisors and test experts have trained teachers in the

devising of innumerable home-made tests which nearly always are speed measures. Textbook writers have built books for pupils around the stop watch. There are, for example, but few arithmetics, among those that have appeared in the past five or ten years, that do not have timed exercises on almost every page. The child recites by the stop watch and he studies by the stop watch. But he doesn't hold the watch. Now any one may learn to do more highly concentrated mental work if he sets himself against time limits, provided he sets the limits and checks on the time himself. But not many of us can escape annoyance when some one else assigns the time limit and holds the watch. The less we have to say about it, the more we are annoyed.

In spite of many modern aids, the average teacher still dictates considerable work to be copied. The child who fails to write fast enough is out of luck. A favorite classroom stunt is to dictate a task or problem for all the children of a class. As soon as each child has finished, he holds up his hand or lifts up his whole body—he stands to indicate his relative superiority. The child who is first to finish has a great advantage. Then he proceeds to make it harder for all the rest. The more hands that wave or children that rise, the greater is the strain under which the other children work. Those who most need a good atmosphere in which to try to think have least of it. The few who grow calloused may improve, but most become tremendously annoyed and therefore less efficient in their mental efforts. (Something certainly happens to the nervous system of a good many children under such conditions which does not promote their physical and mental health.)

The teacher, harassed by numerous reminders of the importance of speed, becomes nervous and oversensitive about the passing of each moment while the child is trying to recite orally. She gives most approval, as a rule, to the child when he answers quickly; she betrays annoyance when he pauses. If he breathes twice before he makes reply, he may read in her movements and facial gestures grave discomfiture; in the meantime, up go the hands of many of the child's classmates. They are vying for attention. They are wishing that the child

attempting to recite may fail, so that as he fails, they may be allowed to demonstrate their excellence. Upon the fallen body of their comrade do they climb to win approval. But the reciting pupil, rather than have them profit by his seeming loss, ventures some reply; if he does not know, he guesses. Usually he gets more approval and less pain if he answers when he knows he is wrong than if he has the courage to confess his ignorance. When the modern schoolroom is running at its "best", as approved by many a supervisor, it is at its worst from the standpoint of mental hygiene, from the angle of efficiency of learning. (Be it remembered that any child learns best when he is most nearly comfortable.) Obviously, too, the modern mania for speeding furthers intellectual dishonesty and impairs the pupil's personality.)

One must not, however, be too hard on the teacher. She is really not to blame. She is doing what she has been taught and told to do. She is trained in the normal school to worship speed. The textbooks on education which she must master are almost unanimous for speed. Her salary to a great degree depends upon how fast she can make her children work. In many a school supervision now is carried on by means of timed tests. Little is being done to help the instructor really to teach better. Almost everything is done to force her to teach "harder", to expend more effort and to make the children seem to work faster. What her children must have covered by 11:15 on March 8 is prescribed by her superiors. Whatever new things are introduced must be crowded in, regardless of these limits. For the convenience of any inspector or visitor who may want to drop in to see her work, she must begin and end each lesson by the clock. She, like the child, must work under the stop watch, and she, like the child, therefore, is exceedingly annoyed.

The supervisor, too, is nervous, for her reputation also is at stake. She never knows when some official survey will be launched. Heaven help her then if the children of her district are found to be a little slower than the children of the schools of Minkopo.

As a result of the eagerness of school men to promote efficiency, elaborate systems of school supervision have grown

up. In many systems the machinery has become very complex. There the average teacher has so many bosses that she hardly knows whom to obey or what to do. The eagerness of the supervisor to get quick results makes her nervous. She inevitably passes on this nervousness to the teacher, and the teacher in turn to the child, who always is the final sufferer.

Better mental hygiene for the child presupposes better mental health for the teacher. But many a teacher spends sleepless, weeping nights on account of supervision. Here, again, the purposes of supervision have been good, but its administration often has been costly. Its aim is to standardize the best in good teaching and to help the teacher. But in practice these efforts often do more harm than good. Too often, too, the supervisor is interpreted as a mere inspector and a destructive critic; she is feared. Her very presence often incapacitates the teacher. She, of course, is only human, and she conscientiously attempts to do her best. What actually happens is that she commands and orders just because of her eagerness to get immediate results. A rare supervisor there is occasionally who takes the attitude of a salesman, who leads the teacher to study children, so as to understand them better and ascertain their specific learning difficulties. This supervisor herself is a master student of the child; she inspires her teachers. As they learn more about their children, they inevitably work out in their own way good teaching methods.

Then there is the curriculum expert. He decides what is good for the child to know. More and more new things he adds, but he is very loath to drop any of the old. Things formerly taught in the college are now taught in the high school, and what used to be taught only in the high school is presented to the child far down in the grades. However good it may be for the child to have these added bits of knowledge, there is little value in exposing him to so much when he actually masters such a small percentage of it. The child overwhelmed by the volume of what he is supposed to master grows more careless in his learning habits and more annoyed by reminders of his failure. And the teacher is more and more likely to despair of helping her children to attain a high quality of achievement that obviously is impossible.

Of course the school expert has made a rare contribution to progress in education. He has demonstrated objectively what are some of the shortcomings in the schools' achievement and he has made us more and more conscious of objectives. The general trend is good. It is the effort to adjust to conditions which the expert has found that is bad. The general nervous state of those who deal with the child certainly is most hazardous. In the anxiety to correct real and apparent defects as revealed in terms of school achievement, the child's comfort and happiness and health have rarely been considered.

Nor has the worst arrived. The "efficiency" movement is gathering a momentum that seems to be almost irresistible. The psychiatrist is confronted by concrete evidences. Parents are beginning to express themselves. Within a few years they are going to register a very vigorous protest. But educational writers still are almost wholly on one side. They practically all are speed propagandists, and they are practically the only ones who can correct the difficulty.

When enough parents protest and enough mental-hygienists speak out what they know, when the big movement toward preventive mental hygiene has grown to its full measure, the educational expert will begin to weigh and to consider.

Researches in the learning field are beginning to appear which point to some of the educational "expert's" fallacies. Although he has been assuming that the way to get speed is to hold the stop watch on the child, he never had available conclusive scientific evidence in support of this assumption. On the contrary, there are now available scientific data which pretty clearly demonstrate its falsity. In a study by the writer and collaborators it was found that learning, when accuracy was emphasized, produced greater speed than when speed was emphasized.¹ A few years later Sturt of England reported a study which corroborates these findings.² She found that in learning typewriting, if the attention was directed solely to speed, accuracy tended to diminish. On the other hand, if the attention was directed solely to accuracy, speed generally improved.

¹ "Speed Versus Accuracy in Learning", by Margaret Broome, Augusta Spett, and Garry Cleveland Myers. *School and Society*, Vol. 8, pp. 687-690, Dec. 7, 1918.

² *British Journal of Psychology*, Vol. 12, pp. 289-300, December, 1921.

The reason that our children work so slowly is because we try to make them work so fast. If emphasis is put upon accuracy and the learner has a comfortable atmosphere in which to work, speed is sure to follow. Then why all this human torture to the school child only to produce inferior learning products?

There is some hope ahead. The movement in this country known as progressive education is in the right direction. Also, in many public schools certain good measures are being adopted to further healthy, happy learning. The classroom is becoming more informal. More teachers now are turning their attention to the learner, considering how he feels when he tries to study and recite. The tendency to motivate learning around life problems and to break classes up into smaller learning groups, thus furthering coöperative school activity, are very promising. There also are developing a wide variety of self-teaching texts and learning exercises at which children are allowed to work at their own speed. A few schools are making honest efforts to reduce the number of specific facts which children are supposed to learn in a given time. But these good things are coming slowly, while the flood of speeding rushes on with terrible vehemence.

Here are a few suggestions for educators:

1. First recognize that the most effective learning presupposes a comfortable learner.
2. Let the educational testers call a halt to their testing program. Some of them should be given a leave of absence with pay for a year or two until the teachers and their children have an opportunity to quiet down.
3. Remove all speed suggestions from the schoolroom. Assemble all the stop watches of the school except those used for experimental purposes, and have them annihilated. Persuade the writers of textbooks to cease to put timed lessons in the pupils' books. (Substitute accuracy and calm for carelessness and haste.
4. Let supervisory schemes be simplified. Let the supervisor cease to be a peddler of pet methods and become, instead, a salesman of the psychology of learning. Let her purpose

be to study how the pupil learns and to inspire her teacher also to study him from this point of view.

5. Let more be done to relieve the teacher of unnecessary work and to encourage her to introduce more human touches into her teaching. Let her be given guidance and materials that will enable her to reach the individual pupil. The development of individual-instruction exercises for self-teaching are in the right direction, for in addition to relieving the teacher of much drudgery, they allow the pupil to progress at his own speed and show him how to teach himself.

6. Let those responsible for the curriculum lessen the number of specific facts and skills which the average child is supposed to master in a given time. Let there be considerable cutting down of the requirements for the slower pupil. All along the line, from the first grade through to the university, there should be more differentiation, so that instead of one diploma for each high school and college there shall be several, each of which shall stand for a very definite accomplishment defined thereon.

7. Let educational experts and school officials confer more frequently with parents to discover how they feel about the curriculum and methods of the modern school. Let school authorities more often seek advice of clinical psychologists and psychiatrists who are now dealing with the many cases that come from among school children and school teachers.

8. To the school psychologist add the school neuropsychiatrist who will check up on the mental health of school children and teachers and advise the school authorities as to methods and curricula in terms of mental hygiene. And of course no school system can consider itself as furthering a good program of mental health without an adequate force of visiting school nurses. Certainly many a child and many a teacher could, by a saner program, be saved from the mounting scrap heap of human wreckage.

THE LEARNED JUDGE AND THE MENTAL DEFECTIVE MEET— WHAT THEN? *

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THE scene is an American court room. It lacks nothing that tradition demands in behalf of justice, adequately served and effectively projected.

What do we ask?

Dignity? The sheriff, venerable holder of an office whose origin is lost in the mists of early history. His deputies, the panoplied demonstration of what buttons can do to transform the follower of the plow and the wielder of the auctioneer's gavel into imposing figures of authority.

Learning? The en-railed group, securely set apart inside an enclosure, presence within which proclaims, however little their persons may, that they are the possessors of the law's deep learning and inviolate traditions.

Security of exact justice? The jury—men of the common sort, balancing their grasp upon primary truth against the last device of legal dispute.

Equality? The patriots of the spectators' benches, giving of their precious time to the end that there shall be preserved the priceless pearl of public watchfulness.

All these, and they but the setting for the enactment of that climax of perfected justice, in which the performers may be but two—the black-gowned justice on the bench, the woe-begone culprit in the pen.

Here is a pair antipodal. The tradition of trial by one's peers has been fully served up to the moment of the verdict—and exhausted. It does not cast its faintest shadow upon the final scene. The learned judge, the personification of justice,

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equipped with full knowledge of how like situations have been met in the course of ages, provided with every instrument and skilled in its every use. The offender against the law, stripped now of every defense, his guilt determined, not more inferior in present standing than he is in actual contrast of his personal resources with those of the man who holds the culprit's fate in his judicial hands.

At this point, an objection is raised.

Argument is offered to this effect: There is no fair presumption that this convicted man is so far inferior, if inferior at all. His skill, indeed, is not in the same profession as that of Your Honor, but it may be that it is as expert. His mentality may not have been enriched by the same breadth of learning, but may have as great natural endowment and may, indeed, have developed to as keen activity, even though a destructive one.

In rejoinder: Waiving the disrespect to the court which the objection implies, the presumption of inferiority is based upon fact as to the usual, and ordinary, and even overwhelmingly prevalent situation. The difficulty of final determination of this issue of relative mentality as between the court and the culprit is that, while to some extent there are employed, or at least available, means of measuring the mentality of the offender, there has thus far been not the whisper of suggestion of measuring the mentality of the court. That fact alone, may it please the court (as it probably does), establishes one side of the equation, or, to speak more accurately, the non-equation. It concedes that the mind of the judge is the superior of the two. Otherwise, in a proceeding which is to be entirely fair, there would be the same provision for mental examination of both the parties. Hence the presumption of difference is sound.

The dispute is technical. It is trivial. (The two terms are often synonymous.) It is too burdensome to interest the patriots who represent the public below the dock. They take it out to benefit by the open air on the courthouse steps, where they come to swift agreement, out of their long observation as bystanders, that the offender is ordinarily a mental inferior, and you do not need to compare him with the learned judge to come to that positive conclusion.

These experts in bystanding are right. They have seen the daily procession of the accused. They have observed the morning-by-morning population of the dock. Their conclusion is the one forced upon every one familiar with the grist the police daily deliver for the judicial mill. The picture of the keen-witted criminal, matching his high skill and active mind against that of the court and the bar, portrays a situation that is so far from ordinary as to have just the interest it proves to have for the reader of the news.

The ranks of offenders are not numerously recruited from high or even from average intellectual levels. The criminal law is regulated to normal intelligence. It operates on the theory of full accountability. Its gears are strained, if not stripped, when the effort is made to adjust it to qualified mentalities and a corresponding variation in responsibility.

But to return to the court room. Meanwhile there have appeared, in proximity to the bench, two new figures—new to our scene and new in the judicial neighborhood. One of these is the probation officer. The other is the psychiatrist. Their presence is a token of this advance in the court's policy—that the judge has developed a wish to know the man he is to deal with in the discharge of his duty and that the judicial process has relaxed to the point of permitting him this knowledge.

The origin of probation, as a power placed at the judge's command, was out of a wish that the court might, in instances of some promise, continue its control over the person convicted of crime and during the period undertake, through an officer at its command, the restoration of the convicted person to right lines of behavior.

That this officer should be the regular informant to the court as to the person awaiting its action, his antecedents, his social conditions, his general conduct, and, if might be, the reason in him for the conduct that had brought him to grief, was not in the original plan. The only service in this direction, even remotely contemplated, was a recommendation of probation in such cases as the officer found to hold out hopeful promise.

He has now been called into quite another service, that of routine investigation in the court's behalf, to supply the judge with a basis of judgment as to the treatment of the convicted

offender. In the courts of at least one state, the judge is an exception who is content to sentence or otherwise dispose of a criminal of high or low degree without the information such a report may give him.

In this function, the probation officer was the precursor of the psychiatrist. The physician qualified to testify as to sanity and insanity preceded him, but his appearance in the drama was at the earlier stage when guilt was at issue and insanity was an alleged factor.

When, in due time (in a sense a tragically overdue time), the court departed from the old traditions and prescriptions so far as to seek knowledge outside the evidence in trial as the basis for discrimination in its disposition, and called the probation officer into the business of investigation and even of counsel, there arose a question this officer was unable to answer.

What was the degree of mental accountability?

Stand aside, Probation Officer. Give room to the expert in mental conditions.

The moment chosen for the mutual introduction of the judge and the mentally defective culprit is late in the proceedings. But it is the first instant that the acquaintance could be brought about. It is likewise the first when these modern innovators, the probation officer and the psychiatrist, fit into the drama. All of them have had a chance to observe the accused in the course of the trial, but all of them—judge, probation officer, psychiatrist alike—only casually; up to now they may have been gaining an impression, but it has been only in anticipation of the climax, when what to do with this convicted person is the puzzle.

Before another exception is entered—before another objection is raised to the narration—let it be admitted that the psychiatrist may have appeared at an earlier stage.

It was when the question was pending as to whether the accused was or was not guilty of the offense charged. Involved in that issue was the accused's responsibility for his act. Was he insane? The expert in mental disorders did not find him so. Was he mentally defective?

To raise that question as affecting guilt or innocence in the

eyes of the law is to call out vigorous objection from the prosecution. How lame, how helpless is the counsel for the defense in its effort to get an answer to the question. He says something about the weakness of the mind—making the accused susceptible to suggestion and to influence—his subjection to control by a master mind—his lack of inhibition. Is evidence to this point admissible? The court speaks: "Mere weakness of mind does not excuse the commission of crime. If one is of sound mind, he is responsible for his criminal act, even though his mental capacity be weak or his intellect of an inferior order."¹

"The law does not undertake to measure the intellectual capacities of men. Imbecility of mind may be of such a degree as to constitute insanity in the eye of the law, but mere mental weakness, the subject being of sound mind, is not insanity, and does not constitute a defense to crime. The law recognizes no standard of exemption from crime less than some degree of insanity or mental unsoundness. Immunity from crime cannot be predicated upon a merely weak or low order of intellect, coupled with a sound mind."²

"There is a vast difference between a child at the age of eleven and that of a man of twenty-eight, and while there is a fair presumption that an infant of tender years is incapable of committing a crime, that presumption does not extend to one of advanced years requiring the state to rebut it. . . . The presumption of the lack of power of thought and capacity in favor of a child is due more to development of his mind, and it is a merciful rule established by the courts, due to his tender years, but that reason does not apply when he comes to manhood. Deficiency of intellect is a species of insanity, and when that is set up as a defense for crime the burden is on the accused to prove it, the presumption being that he is sane."³

The judge has wandered into the field of the presumption of incapacity for crime in an infant, to demolish the notion that mental age is the test. If Sheldon Glueck were present, he would, in undertone, point out that the court was wrong "when

¹ Instruction to the jury in *Wartena v. State*, 105 Indiana 445, upheld by the Supreme Court.

² Supreme Court's opinion *Wartena v. State*.

³ 112 Atl. (N. J.) 400.

it placed the historical reason for the 'infant rule' largely on the foundation of regard for an infant's tender years". Glueck would cite the same authority as that upon which the court is relying to prove that "it is based not upon the consideration of the tender age of an infant alone, but, and more so, upon his mental and moral capacity".¹

We are on the verge here of discussion that has all the possibilities of being unending. We can survey with Glueck the conflicting reasonings of the courts and courageously share in his search for rules that will take account of new truths in the field of mental and moral responsibility.

But we are in the court room of to-day. We are narrating—not predicting.

What we discover is that the courts are not hospitable to the plea of mental defectiveness as affecting legal guilt. There is quite enough disturbance in the issue of insanity. The arrival of mental defectiveness brings an added strain on judicial interpretation. Degrees of responsibility are perplexing. And when behind the mental defective trails the moral imbecile, what refuge of law offers a safe retreat?

A glance into the jury room—as if there could be a glance into this cloister of justice—when there has seeped into the case evidence that the accused is feeble-minded, would possibly reveal a valuation on this fact that escapes judicial restraint. Even in this shelter, the force of a public sentiment—rather of public emotion—will overmatch the force of expert testimony. Given a crime sufficiently atrocious and a popular resentment sufficiently inflamed, and the measurings of mental responsibility go to discard.

All this is over. The jury has pronounced our youth in years and child in mind guilty. Now we shall see the learned justice in the exercise of a new freedom.

No longer is he held within the bounds of information as to the person with whom he is to deal supplied to him in the course of the trial or at this point contributed by the prosecutor and the counsel for the defense.

The prosecutor, true to the traditions of his rôle, pleads for

¹ *Mental Disorder and the Criminal Law*. Boston: Little, Brown and Company, 1925. P. 196.

the full penalty of the code. To him the culprit is the condemned offender against the people and the doer of a vile wrong against his "innocent victim".

The culprit's advocate is heard in familiar plea for consideration of the mitigating facts—youth, it may be, a bereaved mother, the wife, the children, the absence of criminality in previous life—yes, and a mental inferiority that made this youth the easy, undesigning victim of circumstance.

Confusion, worse confused—save that there is at the judge's command knowledge of the facts the pleaders may not discredit or distort.

The liberation of our modern judge, confronting the problem of the treatment of the convicted offender, is twofold. There are (1) the provisions for social and personal information; (2) the addition to the court's resources for treatment. Within these let us note the progress.

Hidden within the addition to the court's equipment with probation officers, little appreciated at the outset, was the possibility of contribution to the court's knowledge of the intimate facts as to the person whose immediate future is in its hands.

The common spectacle of the court room is the delivery, informally, unchecked by hair-splitting rules of evidence, of the product of an investigation.

It is not partisan or prejudiced. On the one hand, it spares nothing of the past. On the other, it yields all that may be learned of the facts as to the home, employment, associates—whatever falls within the range of a social inquiry. The untoward facts as to previous court record are revealed.¹

Yet more revealing, more intimate, more conclusive as to the court's action, what of the man? The statutes of American states are bearing increasing evidence of the purpose that no court shall be without the aid the psychiatrist may bring

¹ Massachusetts, a state which has the advantage of the longest experience with probation and the further advantage that every court has such service, has developed a system of daily gathering of all criminal-court records at a central office and the assembling of these personal records for the immediate use of the courts. This clearing house has as its contributors the probation officers throughout the state. Its patrons are the courts and public departments to whom it is supplying information at an annual rate of 125,000 answers to their inquiries.

at the point of crucial interest, the point of its determination as to treatment.

Here no legal tradition interferes. Here is no limitation of disputed definitions. The judge has a right to know. He is free to place his own valuations upon the contributions to his knowledge. Within such bounds as the code allows, his determination as to treatment may rest upon the facts expert aid has brought him.

The trial of Leopold and Loeb is the conspicuous instance of the exercise of the right of the court to professional information bearing upon disposition. It loses none of its exemplary value because of the express refusal of the court to be guided by the high expert testimony given it.

Leopold and Loeb marked monumentally the place psychiatry has come to hold in the judicial process.

What was there demonstrated is possible in any American court, varying not at all as to the place it may have in the process, varying only as the means of such information are provided and as the dispensers of justice may choose to employ them. And, must we also note, with precisely the same freedom to disregard the expert contribution in the court's final act.

The other line of advance is in the enlarging equipment of the courts with methods of treatment. To enrich the court with knowledge and to provide it with no choice in its action, no resources for treatment which its judgment seeks, would be idle posturing.

Reformatory institutions were the contributions of the nineteenth century. Probation as a power granted the court to retain its control and correct on terms of its own prescribing is the outstanding feature of the first quarter of the twentieth. It has but just been given its national recognition in the equipment of the federal courts with this instrument.

The outlook broadens with the addition of the specialized institution, precisely recognizing the complication of criminality with mental defect, such as the institutions for the defective delinquent.

It would be repetition of what others have brought to this session of the Association for the Study of the Feeble-minded

to dwell upon the contribution of psychiatry to the service of the courts. The probation service lays claim to kinship. It has a certain pride in having opened the way. The community of interest is in the purpose to enlighten—by which, of course, is meant to inform—the court at the point of the court's greatest need.

The court is about to adjourn.

Eyes turn now to the judge.

Not all who occupy his elevated position would have as searchingly availed themselves of means of revelation as to the culprit awaiting the final word.

Some of them would have cut short the investigator's story.

Certain of them would have had no patience with psychiatric intrusion—they would have known a mental state at sight.

The traditions of detachment and of self-sufficiency might have been more devotedly served.

The judge in our picture has sought to know his problem and, knowing it, to balance a purpose to deal effectively with the man in the dock with a comprehension of the community's concern that its security shall be conserved.

Out of the court room, and away from the courthouse, we are entitled to discuss with the freedom of American citizens, against which even the courts are not sheltered, the proceedings we have witnessed.

The traditions of the courts deserve respect. They are the bulwark of justice. If some of them seem archaic, even these are tokens of the fact that the courts and their processes as we have them are the product of centuries of development, the molding of an instrument of government by the pressure of public opinion.

Law is chiefly tradition. Students of law and administrators of law are steeped in precedents. In the Shakespearean description of the judiciary as "full of wise saws and modern instances",¹ we must recognize that the word "modern" is used in the sense of model or illustrative and not in the sense of recent or of novel. Modern instances, as we would use the phrase, have poor chance of life in the court room except as

¹ *As You Like It*. Act 2, Sc. 7.

they yield new objects for the application of ancient, or at least accepted, rules.

No wonder, then, that recent advance in the study of human mentalities in relation to behavior has outstripped the courts in recognition of qualified responsibility and again in the notion of individualized treatment. The judge gets into difficulty when he tries to reconcile the plea of a qualified, a varying, responsibility with the tradition as to legal guilt. They simply refuse to mix. Hence the too familiar scorn with which the judge looks upon the psychiatrist. There is a judicial satisfaction in regarding this newcomer as an intruder. A frequent stroke of humor by more or less eminent members of the judiciary is confession of inability to pronounce the name of this professional—psychiatrist or “whatever you call him”.

No wonder, either, that agitators for return to the vindictive penalties that of all things have been proved by the centuries as ineffective for social security against crime have no toleration for the idea of shaping treatment to individual capacity and need. These also do not reconcile. And that the courts respond by momentary efforts to make sentences exemplary is only new manifestation of traditional reliance upon the theory of deterrence, which is at least capable of being grotesquely overvalued.

What, we may ask, is to be the demeanor of the profession, with its theory of varying responsibility and its urgency of degrees of mental disorder and defect as respectable items in the reckoning of guilt and prescription of treatment, toward the court?

First, let us suggest, humility. It would be the height of impertinence to claim that a substitute for all the law's traditions was being offered. Historically, there has been a long struggle to settle the relative standing of the law and medicine in the realm of justice. The varied—and we are tempted to say “variegated”—statutes of American states bear evidence to the conflict of ideas, by no means yet ended. There is a balance yet to be sought. No; substitution of psychiatrists for judges is not the desirable end—nor, in truth, anywhere the desired one.

This confidence the professional in mental states is entitled

to—that he brings a contribution to the administration of justice. It is a contribution of the highest social value. It holds out fitness of treatment as a corrective to the notorious failures of the traditional processes to repress habitual, repeated criminal conduct. It offers its aid to determine causation in the individual case and its suggestion of continuing care, to the point if need be of permanent restraint, as a change from the proven futilities of the classical penalties.

Such a confidence is warranted in the recognition that legislatures have already paid this contribution. Possibly the advance has been as rapid as is prudent. There is no apparent finality in the discoveries and the theories of the mental department of the medical profession. That it brings reinforcement to the courts and to the whole organization of corrections is a fact that is winning recognition in the face of some popular and even some judicial derision, diminishing as we have reason to believe that static or reactionary response to be.

At one point in our court visit, we dropped rather summarily the observation that the rank and file of offenders are inferior men and women. We accepted that as the truth of the matter. Does it imply that they are not worth any serious consideration?

The weary judge might almost be excused in thinking so. Happily, the courts do not reach that degree of fatigue. Their troubles are of another sort. But if, and to the extent that, they fall into routine dispositions as answering the immediate purpose, out of a sort of hopelessness, the community is not unconcerned. Its demand, if it is conscious of its interest, is that this inferiority shall not be an excuse for triviality; that the measure and the nature of variation from the normal shall be individually discovered and that the whole scheme of dealing with it shall be adjusted to the individual treatment—the only real and the only effective correction of both a personal fault and a social harm.

It is historic that forward steps in the methods of criminal procedure are initiated socially. When the king wanted a specialized treatment of child offenders, he took control of them away from the courts and passed it to his chancellor.

When the sovereign state discovers a social need not met in the code, it does not await judicial initiative. It does not ask the guardians of precedent what instruments may be found in the arsenal of the law. It acts. It legislates. It directs.

At least, it provides the courts with a new power and leaves to public opinion the application of pressure to compel its use.

The adoption of probation is a monumental instance. In a phrase of twenty words, a legislature gave the courts of one state the power to retain control of convicted persons through a period of test under its supervision.

Supreme courts, state and finally federal, declared no such power inhered in the courts and could only be conferred by statute. The point is that the courts had not asked it. To the extent that a few of them had tried to exercise it they had listened to the appeal of persons with a social vision from beyond the bar's enclosure, in fact from the ranks of bystanders.

Of course, this new power is not universally welcomed nor even surely discovered by the courts. Wherever the command of the statute is not positive, only an insistent public demand brings into the court the officer whose service is an essential to the employment of this instrumentality. The courts did not initiate the device. They are none too sure to welcome it. But when and where they have come to familiar use of it, they defend it with ardor—an ardor that is exactly proportioned to their prudential exercise of it.

So, too, with the indeterminate sentence. So, too, with specialized treatment of juvenile offenders. So, too, with the informalities of the domestic-relations court. Children—all of them—of social parentage and of judicial adoption.

Amelioration of the law to recognition of mental variations both as to responsibility and as to treatment is advancing in precisely the same path. The record of Massachusetts legislation is a fair illustration.

When, in 1911, the phrase "defective delinquent" and its definition were written into law, it was under the leadership of Walter E. Fernald, the first president of your association, a psychiatrist who was even more a statesman.

When, in 1921, the much-cited statute for the automatic ref-

erence of certain persons accused of felony to the state's department of mental diseases was enacted, it was from the hand of an eminent and forceful member of your profession. It is still a mystery by what magic he, all alone, brought the legislature to this lawmaking. One theory is parliamentary anaesthesia.

When, again, in 1924 another pioneer statute in this field was enacted, providing for the routine mental examination of prisoners in county institutions, including a provision for the automatic submittal to the courts of the results of such examination in the case of the reappearance of the offender in court, it was on the petition of a civic association. By another stroke of magic, it had the support of the county officials of the state—evidence of an occult, even a providential, concern in this class of legislation.

Less in detail may be cited the progressive legislation linking the courts with the mental hospitals—to speak more respectfully, linking the mental hospitals with the courts—in a clinical capacity, as establishing the claim that it is from civic and, more definitely, professional sources that the advance of legislation is accomplished.

The crowning fact of the situation is that the administration of justice is in the hands of the courts. Constitutions guard the judiciary's independence as vital. Legislatures may curb the discretion of the courts only at great peril and always at a sacrifice. But legislatures may provide new instrumentalities. They may supply better means for relating criminal procedure to social needs. Whether they shall be used, and to what extent, depends finally upon the choice of the judge—a varying factor.

Professional research, scientific discovery, social theory, all relate themselves to the dealing with the criminal through the court. And the advances already made, now making, and to be hoped for, turn upon recognition by the great number of judges whose minds are hospitable to truth revealed in fields it is not their habit or their duty to explore.

PSYCHIATRY AND UNIVERSITY MEN

A STUDY OF 300 CASES ON THE PSYCHIATRIC SERVICE OF THE UNIVERSITY OF CALIFORNIA

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AMERICAN universities and colleges have been among the last of our educational institutions to avail themselves of the knowledge included generally under the head of mental hygiene. Elaborate student-health programs have been worked out and executed in many of our universities, in which the other forms of medical service have been represented, but until recently the psychiatrist, or even the psychologist, has not been included. Within the last few years, in a small minority of our universities, this defect has been remedied. Yale was recently fortunate enough to receive funds for the execution of a real mental-hygiene program. Certain schools at Harvard for a number of years past have maintained a psychiatric consultation service. Dartmouth has a consultant in mental hygiene. West Point has such a service. The University of Minnesota also reports psychological and psychiatric work in its student body. Interesting material has come from these clinics, sufficient, one would feel, to warrant further work of a similar nature. We refer here to the work reported by Ruggles, formerly of Dartmouth; Stanley Cobb at Harvard, and Peck at the same school; Morrison and Diehl at Minnesota; and Major Kerns at West Point.

For the last four years the University of California, the first institution to operate a model student-health service, has included a psychiatrist on its staff. At first one psychiatrist was appointed, but with an increasing service, a second was added three years ago and the psychiatric service was divided, with a woman psychiatrist in charge of the female service and a male psychiatrist for the men. The psychiatrists are appointed as an integral part of the general staff of the university infirmary. Office hours are held, at which time stu-

dents are free to come for consultation about their problems, whether these are definitely psychiatric or merely maladjustment situations.

At this point we may well stop to consider the rather vital question as to the wisdom of associating the mental-hygiene service of a university with its student-health work. Various possibilities have been suggested—affiliation with the psychological department, or with the deans' division, or freedom from any connection, in offices of its own. We feel very definitely at the University of California that the connection with the student-health center is the logical association. Our feeling is based on the following considerations:

1. As to association with a psychological department, we feel that there is in most instances a complete lack of clinical insight in such departments. The absence of medical training has not prepared the psychologist to evaluate physical factors and the tendency is to consider the problems presented as purely psychological. The trend, we feel, is too purely academic. There is the additional disadvantage of placing the students in a situation in which they feel that they are being used as experimental material.
2. As to association with the administrative offices, our feeling is that the scope of the contacts here are too limited.
3. Close association with the medical division of the university has, we find, the following advantages:
 - a. Close association with other branches of clinical medicine, which gives us an opportunity for complete examination of our students and the application of therapeutic procedures, where indicated, in fields other than psychiatric.
 - b. The reference from the general dispensary of large numbers of students who would otherwise be overlooked.
 - c. The habit on the part of the student of seeking the infirmary for all physical difficulties and the tendency to bring his mental problems to the same place.

The patients who come to the psychiatric clinic may be divided into the following classes:

1. Students with mental problems, who come voluntarily.
2. Patients referred from the general dispensary and other medical departments.
3. Patients referred from various deans and from the president's office.
4. Patients referred by individual faculty members.

The patients, of course, were few at first and the growth of the service has been gradual. However, as the knowledge of it has spread in the student body, by word of mouth and by lectures on mental problems by the staff psychiatrists in the freshman hygiene course, the material has come to assume fairly sizable proportions. An attempt is being made at the present time to acquaint the faculty more fully with this service, and a committee—consisting of the director of the infirmary, the dean of men, the dean of women, the dean of the law school, the dean of the school of education, and two university psychiatrists—has recently been appointed by the president to consider mental-hygiene problems and to work out an adequate program for mental health in the student body.

In this report we will consider 300 male students, seen in the years 1924–26. These students were referred to us from the following sources:

General dispensary.....	198
Infirmary wards.....	21
President's office.....	3
Dean of men.....	14
Other deans.....	5
Heads of departments.....	5
Berkeley police.....	3
Voluntarily.....	51
	<hr/>
	300

The record for clinic attendance shows the following figures:

	Number of patients	Number of visits
1924.....	68	250
1925.....	98	240
1926.....	134	301
	<hr/>	<hr/>
Total.....	300	791

The following figures, which show the distribution by years, are of interest and, we believe, of some significance:

Freshmen.	81
Sophomores.	83
Juniors.	68
Seniors.	49
Postgraduates.	20
Total.	300

As to the types of problem represented, our diagnoses are of necessity not strictly accurate, many cases being unclassifiable and others not clean-cut pictures of the type under which they are listed. Roughly classified, the problems presented by our patients were as follows:

Problem	Number of cases	Average age
Maladjustment.	84	22
Sex.	58	21
Hysteria.	15	23
Neurasthenia.	21	24
Psychasthenia.	12	22
Anxiety neurosis.	5	23
Traumatic psychoneurosis.	11	21
Intellectual inferiority.	11	21
Psychopathic personality.	10	22
Disorder of ductless gland.	15	19
Neurological disorder.	24	20
Psychosis.	24	23
Unclassified.	10	22
Total.	300	21.7

It is evident from these figures that maladjustment is the problem most frequently encountered. A previous report of Doctor Eva C. Reid's, on the psychiatric service for women at the University of California, shows essentially the same fact. Of course all of our cases, including the psychoneuroses and psychoses, are maladjustments in one form or another, but the cases classified here under the term maladjustment are not those that present any real psychoneurotic or psychotic manifestations, but rather that great group of students, who, for reasons of financial stringency, family difficulties, or failure to adapt themselves to the rather unusual demands of a great university through poorly balanced programs or

inability to visualize their goal, are unhappy or at least are not entirely satisfied with university life.

This group of students is of necessity large, and probably larger in an institution such as the University of California than in a smaller school. In this group are many students, mostly freshmen, who bring maladjustment problems to the infirmary because of the friendly feeling between physician and student. We find that the boy who comes from a small high school is often overwhelmed by the environment of a large university. His home situation has been suddenly changed; even his food is different; he doesn't know the university geography, doesn't know what is expected of him, and doesn't know how to study. It takes him six months or a year to come to any comfortable and reasonable balance. Such students need supervision and bolstering to tide them over this period, and need primarily some one to talk to. They are lonesome and out of their depth. Assistance at this stage may well mean that the boy can go on to a well-rounded, healthy university life, instead of becoming discontented and shut-in.

The procedure instituted for such boys varies. First, we attempt to see that they are in a proper boarding house, or if they are in fraternities, that the upper classmen of the house coöperate in handling the situation. Well-balanced programs of work, sleep, and recreation are suggested. Some kind of recreation or extra-curriculum activity is urged, even in their first year. These students are advised to go in for glee-club work, dramatics, or activity among students in the local churches, since most of the Berkeley churches have student pastors who coöperate closely with us in handling such problems. The statistics that have been compiled show that the bulk of these students are non-fraternity men. Of the 300 under consideration, 239 were non-fraternity men and only 61 fraternity men, while the student body as a whole is made up about equally of fraternity and non-fraternity men. One hundred and ninety-nine of our 300 were not participating in any extra-curriculum activities.

These findings are one more argument in favor of a dormitory system. The fraternity freshman is provided with adequate contacts, has a certain amount of social outlet, and is

more or less forced to choose some extra-curriculum activity, and thus has a better opportunity for a more speedy adjustment than has the non-fraternity man. The recreational center at Stephens Memorial is a big step in the right direction, especially for these non-fraternity students, for here they can meet other students, dance, play cards, read, and otherwise entertain themselves under excellent surroundings.

Financial stringency is not a difficult problem, for nearly always it can be eased up by recourse to a variety of funds, scholarships, loans, or part-time employment.

Then we have many students who, in the maelstrom of their freshman year, wonder what it is all about and what they are driving at anyway. Our procedure is usually to have such students make contacts with faculty members in the department in which they are most interested. This faculty member is in a position to give the student a perspective and some encouragement.

To cite a case in point, a boy of nineteen came to us with the complaint that he could not sleep. We found that he was from a rural high school, where he had had an excellent scholastic record and had been the "big man" of his year. He came to the university with insufficient funds and found himself a job washing dishes in a fraternity, for which he received board and room. His university work was a bare passing average. He worried much over what was expected of him in the first mid-term examinations and was given a "cinch" notice in chemistry. He took no outdoor exercise and a minimum of gymnasium work. He had not been to a single party or student gathering of any sort. He knew possibly twenty-five students on the campus, but none of them well. In brief, he felt that he was out of his depth and was looking around for help. Our procedure with this boy was:

1. To arrange a change of work, so that at meal times he had an opportunity to meet and associate with other students.
2. To put him in contact with an understanding faculty member in the department in which he hoped to major.
3. To give him a note of introduction to the student pastor of his church affiliation.

4. To find a place for him, in a minor part, in one of the university dramatic productions.
5. To advise and aid him to outline for himself a well-balanced program of study, exercise, food, and recreation.

The sex problems are not so easy of solution. They come generally under two heads—masturbation and homosexuality. With masturbation our procedure is along the lines of sexual reëducation and frequent conferences. The improvements are fairly numerous. The problem of the homosexual is, naturally, much more difficult. At one time in our university history such students, when found out, were immediately dropped. It is difficult to say what our stand should be in these cases generally, but our feeling is that we should make every effort to improve the situation through (1) analytical procedure; (2) redirection of energy into healthful channels; and (3) reëducation.

Occasionally, but not often, dismissal must be recommended. These students should be regarded as sick, rather than malicious, and in need of treatment rather than punishment.

The psychoneuroses proper, including hysteria, psychasthenia, neurasthenia, and so forth, are too big a problem for generalization, but there is much of interest in these groups. From an intellectual point of view, our type of material is good, and we feel that if anything can be done to improve a psychoneurotic, it is with material of this kind—intelligent men, willing and eager (in so far as a psychoneurotic can be), for help and anxious to coöperate. Our work is made more efficient with these students, in the first place, because it involves no financial obligations and, in the second, because our staff has the power to keep them coming for necessary treatment. While time does not permit of any ideal analytical technique, this is our general mode of procedure, and it is carried out as fully as the time at our disposal will allow.

The great class of intellectual inferiors is a sad one in any institution of learning. These boys have no mental capacity to acquire an academic degree, but would make excellent mechanics or farmers. Such boys, after talking to them, and to their parents if possible, we recommend to the admin-

istrative offices as poor university risks, to be dropped when possible.

The students with psychopathic personalities we attempt to keep under our supervision to prevent these emotionally unstable persons from running into too many and too great difficulties. We are not optimistic enough to feel that we can cure them.

Students with psychoses, fortunately, form only a small percentage of our patients. In students suffering from active psychoses, we recommend definitely to the university authorities that they be dropped at once, and we make every effort to help them secure suitable care after leaving the university. Students with the milder psychoses, such as our so-called "pre-precox" group and our mild manic-depressive cases, we keep under regular and fairly close supervision. Commitment in our acute cases is an occasional necessity.

The twenty-four neurological cases examined were of the following types:

<i>Diagnosis</i>	<i>Cases</i>
Epilepsy	10
Brain tumor	1*
Multiple sclerosis	2
Progressive muscular atrophy	1
Friedreich's ataxia	1
Peripheral neuritis	2
Migraine	4
Encephalitis	3

* Diagnosis questionable.

Table I on page 46 may be of interest as showing the number and kind of concomitant physical defects in the various problem groups. Table II gives our findings as to the amount of improvement in the respective groups.

SUMMARY

Our findings on this group of 300 students may be summarized briefly as follows:

1. The mental-hygiene efforts of a university can profitably and logically be associated with the student-health service.

TABLE I. CONCOMITANT PHYSICAL DEFECTS IN 300 MALE STUDENTS EXAMINED ON THE PSYCHIATRIC SERVICE, UNIVERSITY OF CALIFORNIA

Problem	Cases	Physical defect.								
		Total	Disorder of heart	Disorder of lungs	Anemia	Gastro-intestinal disorder	Defective teeth	Defective tonsils	Other foci of infection	Faulty posture
Maladjustment	84	64	4	1	24	6	18	5	2	4
Sex	58	35	1	0	11	2	14	3	3	1
Hysteria	15	19	3	0	7	2	1	2	1	3
Neurasthenia	21	34	2	2	13	3	4	1	5	4
Psychasthenia	12	12	0	0	1	2	7	0	0	2
Anxiety neurosis	5	10	1	1	3	1	0	2	1	1
Traumatic psychoneurosis	11	7	0	0	2	1	3	1	0	0
Intellectual inferiority	11	18	3	1	8	2	1	2	1	0
Psychopathic personality	10	8	0	0	2	0	2	2	1	1
Disorder of ductless glands.....	15	19	5	0	4	1	5	2	1	1
Neurological disorder..	24	14	2	0	2	1	6	3	0	0
Psychosis	24	21	5	1	8	2	4	1	0	0
Unclassified	10	13	1	0	6	1	3	2	0	0
Total	300	274	27	6	91	24	68	26	15	17

TABLE II. AMOUNT OF IMPROVEMENT IN 300 MALE STUDENTS EXAMINED ON THE PSYCHIATRIC SERVICE, UNIVERSITY OF CALIFORNIA

Problem	Total	Improved cases	Unimproved cases	Cases lost track of
Maladjustment	84	50	21	13
Sex	58	36	10	12
Hysteria	15	9	3	3
Neurasthenia	21	10	4	7
Psychasthenia	12	10	2	0
Anxiety neurosis.....	5	3	1	1
Traumatic psychoneurosis.....	11	9	2	0
Intellectual inferiority.....	11	0	11	0
Psychopathic personality.....	10	4	5	1
Disorder of ductless gland....	15	5	8	2
Neurological disorder.....	24	12	7	5
Psychosis	24	7	4	13
Unclassified	10	5	4	1
Total	300	160	82	58

2. A great number of our patients seek psychiatric assistance voluntarily.
3. A large percentage of the patients in a university psychiatric service consist of relatively simple maladjustment problems. Sex problems, psychoneuroses, and psychoses are met with in the order mentioned.
4. Our greatest degree of improvement has been obtained in our maladjustment and in our sex cases.
5. There is a greater amount of mental difficulty among students with limited contacts.
6. There is little evidence of a physical basis for the mental abnormalities encountered except in cases of traumatic psychoneuroses, disorders of the ductless glands, and neurological disorders.

RECOMMENDATIONS

Taking into account the facts and figures that we have presented, we feel warranted in making the following recommendations as to the needs of a university mental-hygiene program:

1. A mental-hygiene department should be associated with the student-health agency, should include one or more psychiatrists and one or more social workers (more especially with women than with men), and should have adequate clerical assistance.
2. A mental-hygiene committee should be provided, as a standing committee of the university, to be composed of representatives of various major departments of the university, together with the university physician and the psychiatrists.
3. Mental-hygiene lectures should be a part of the freshman hygiene course.
4. An optional course in mental-hygiene problems, to include lectures, personal conferences, and reading, should be offered.
5. An effort should be made for a wider coöperation between faculty, administrative offices, and the university psychiatric staff.

A FURTHER DISCUSSION OF COLLEGE MENTAL HYGIENE *

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THE question as to what constitutes mental hygiene in a university may perhaps best be answered by considering briefly three things: first, what mental hygiene is; second, some of the objects of a university; and third, a few of the problems that arise in the application of the principles of mental hygiene to the university student.

Mental hygiene is concerned not only with the treatment of the frank psychoses, neuroses, and other mental kinks; it is far more interested in the prevention of these conditions. It attempts to educate normal individuals to know themselves, so that they may make proper adjustments to the various situations that they are constantly meeting, thus enabling them to live happier, more efficient, and better balanced lives.

A university is in part an institution for the promotion of higher education, which in a broad sense includes "the systematic development and cultivation of the normal powers of intellect, feeling, and conduct, so as to render them efficient in some particular form of living or for life in general".¹ Besides offering instruction in the various branches of science, literature, and the arts, it is the duty of a university to give its students sufficient information concerning their physical and mental welfare so that they may make the most of their opportunities. They should not be handicapped by unnecessary physical illness or mental stress. The physical and mental factors cannot be divorced from each other, as the one may affect the other. There are, however, an infinite number of cases in which improperly controlled emotions have been the basic cause of unhappiness, failure, or a distorted point of view. Through their student-health services, which

* Read before the Central Neuropsychiatric Association, Minneapolis, October 8, 1927.

¹ Definition of Education in the New Standard Dictionary.

are being developed to a high degree of efficiency, universities are looking after the physical welfare of their students, but many have as yet failed to lay sufficient stress on the mental health of their personnel, including both faculty and students.

It is encouraging to note, however, that mental hygiene in colleges and universities has advanced rapidly in the last five years. In 1922 seven universities out of fifty-four were making, or soon hoped to make, some organized effort in this field.¹ In 1924 three out of twenty universities with well organized student-health services had psychiatrists on their staffs. In a survey of fourteen universities in 1926, Hopkins² found that five had well-functioning mental-hygiene services, while four others were doing creditable work in this field.

In 1927, at a meeting of college mental-hygienists held under the auspices of The Commonwealth Fund, twenty-one psychiatrists were present, including three from preparatory schools. Viewing such progress, Thompson³ makes the statement that it is no longer progressive to have an expert in mental hygiene on the university staff—rather it is reactionary not to have one.

There are no definite statistics available as to what percentage of the faculty or the student body as a whole have emotional difficulties, since most of the work has been done on selected groups or on those who have had more or less outstanding nervous symptoms. In a study of 190 freshmen, Dr. Diehl and I⁴ found that at least 6 per cent of these boys and girls had definite, outstanding mental problems. In a group of 20 unselected men from a total class enrollment of 250 in the Graduate School of Business Administration of Harvard, Peck⁵ found 13 normal personalities, two definite

¹ See *Mental Hygiene and Our Universities*, by A. W. Morrison, M.D. MENTAL HYGIENE, Vol. 7, pp. 258-70, April, 1923.

² "Personal Procedure in Education", by L. B. Hopkins. *The Educational Record*, Supplement, No. 3, October, 1926. Washington: American Council on Education, 1926.

³ *The Value of Mental Hygiene in the College*, by C. Mildred Thompson. MENTAL HYGIENE, Vol. 11, pp. 225-40, April, 1927.

⁴ "Some Studies on Mental Hygiene Needs of Freshmen University Students", by A. W. Morrison, M.D., and H. S. Diehl, M.D. *Journal of the American Medical Association*, Vol. 53, pp. 1666-72, November, 1924.

⁵ *Mental Examination of College Men*, by Martin W. Peck, M.D. MENTAL HYGIENE, Vol. 9, pp. 282-99, April, 1925.

neuroses, and five minor personality disorders. Blanton¹ states that a study of 1,000 unselected junior and senior students showed that fully half had emotional difficulties, while 10 per cent had maladjustments of so serious a nature as to warp their lives and, if untreated, possibly cause mental breakdowns. Ruggles,² Williams,³ and others have emphasized that the percentage of boys and girls struggling with definite problems of adjustment is much larger than is generally realized.

That such should be the case is not strange when we consider some of the emotional problems of the student. Williams³ has summarized the genesis of these as follows: The entering student has "problems that are inherent in himself, problems that were not of himself, but that have been made a part of himself through the unfortunate activity of others; feelings of inferiority where, perhaps, inferiority does not exist or no longer exists; unhealthy modes of reaction to such feelings . . . ; feelings of guilt; unhealthy attachments to members of the family or to others; many confusions over matters of sex; problems growing out of efforts of emancipation from the family; healthy reactions, misunderstood, and not well received, to unhealthy situations, thereby giving rise to a series of secondary problems, jealousy, unhealthy attitudes toward questions of authority, fears of various sorts". MacCracken⁴ thinks that the divided home is responsible in a great many cases for the personal problems of the students. Thompson⁵ is of the same opinion, but mentions in addition the student who has been a "whale in a little pond and finds herself only a minnow in the sea of college". Menninger⁶ reports that it is striking to note that of 102 students who, in reply to a questionnaire, showed no desire or need for a

¹ A Mental Hygiene Program for Colleges, by Smiley Blanton, M.D. *MENTAL HYGIENE*, Vol. 9, pp. 478-88, July, 1925.

² *College Mental-Hygiene Problems*, by Arthur H. Ruggles, M.D. *MENTAL HYGIENE*, Vol. 9, pp. 261-72, April, 1925.

³ *Mental Hygiene and the College Student: Second Paper*, by Frankwood E. Williams, M.D. *MENTAL HYGIENE*, Vol. 9, pp. 225-60, April, 1925.

⁴ *Mental Hygiene in the College Curriculum*, by Henry N. MacCracken. *MENTAL HYGIENE*, Vol. 9, pp. 469-77, July, 1925.

⁵ See note 3, page 49.

⁶ Karl A. Menninger, M.D., in a personal communication.

personal interview, only 11 complained of poor health in childhood. This number was considerably greater in those needing a conference. Peck¹ feels that personality disorders and functional nervous illness bear little relation to general physical health. Cobb,² on the other hand, found almost no nervous symptoms in those approaching perfect physical fitness and the highest percentage of maladjustment and nervous reaction occurred in those in poor physical health. Our survey³ of 190 freshmen showed that albuminuria, deafness, functional heart conditions, and, to a less extent, lung defects and hypertension were more frequently present among the maladjusted. Ruggles⁴ divided two-thirds of his cases into two groups—those whose troubles had a physical basis and those that were based on environmental and psychological difficulties. This last classification probably represents the true facts, as the physical, environmental, and psychological, independently or together, may be the etiological factor or factors in such conditions.

During the college year of 1926-1927, 50 students at the University of Minnesota were studied.⁵ Of this number 28 were referred from the student-health service and eight by deans or student advisers, seven reported voluntarily, and seven came from other sources. Owing to the limited time available for this work, no attempt was made to seek out cases that needed mental hygiene. A little over half of the number were from the College of Science, Literature, and Arts. Ten were from the professional and graduate schools, and the rest were scattered among the other colleges. All classes, from freshmen to seniors, were about equally represented. Physical conditions were responsible for the troubles of seven of these students, although eight others had such findings as infected tonsils, functional heart disturbances, albuminuria, and so forth, at the time of entering the university. It was difficult and at times almost impossible to trace back to a single cause the problems of these students. In many cases

¹ See note 5, page 49.

² Quoted by Dr. Arthur H. Ruggles. See note 2, page 50.

³ See note 4, page 49.

⁴ See note 2, page 50.

⁵ In the mental-hygiene division of the student-health service.

there seemed to be several causes of nearly equal importance. Speaking in a general way, family conditions, such as divided or unhappy homes, improper discipline, and emotional instability in the parents, accounted directly for a third and probably indirectly for a great many more. Ignorance and anxiety associated with sex or love affairs were the immediate cause of one-fourth. Worry over finances, difficulty in adjusting themselves to the college environment, the confused thoughts of the adolescent, and improper methods of study were other etiological factors. The physical stress of earning their way with insufficient rest and recreation was responsible for four, while the problems of four others were directly traceable to their total disregard of regular habits of rest, exercise, and food.

Thirteen of these students had problems of a minor nature and one interview appeared to be all that was needed to clear up their difficulties. Twenty-three required two or more consultations, 15 of these making excellent adjustments. There were four definite failures, at least one of these not being college material. The results with the remainder were unsatisfactory, due in part to insufficient time for observation and in part to a lack of the proper personnel to follow up these cases and to attack etiological factors outside of the university.

In the establishment of a mental-hygiene program in a college or university the method of procedure will differ somewhat, depending upon the kind of university—whether it is coeducational or otherwise and whether its students live mostly in dormitories or at home—its size, its location in relation to a city, and the type of student it attracts. No attempt will be made here to outline in detail such a program, but there are one or two phases that warrant special attention. Granting that it is headed by a psychiatrist, properly trained in this type of work—and such a qualification is very necessary if any results are to be accomplished—the most important thing is to get into personal touch with the students—all of the students, for such conferences should contribute something of value to each one, even though no well-marked nervous disorder be present. These personal interviews represent the

ideal approach, but they take considerable time and may have to be followed by other interviews. In a university with a large enrollment, such as at Minnesota, where the entering freshmen last year numbered nearly twenty-five hundred, such a procedure is impossible, unless a number of full-time psychiatrists are employed. This is too much to be generally hoped for at this time.

In these large universities contact with the student has to be made, in part at least, in other ways. This may be accomplished through lectures to selected classes, through informal talks to smaller groups, or, more particularly, through the faculty, especially those who come into close contact with the students, such as the deans of men and women, the student advisers, the psychology department, and those who have to do with student personnel work, including the vocational-guidance and employment and placement services. Therefore, in initiating a mental-hygiene program, the interest of the faculty in mental hygiene should be stimulated by personal interviews and lectures. The faculty should be educated to recognize the common symptoms of emotional disturbance and so be in a position to recommend an interview with the psychiatrist, who, by the way, should be called by some other term, such as, perhaps, "special adviser". Such faculty instruction would undoubtedly benefit many of its members, give them a better understanding of student behavior, and aid them not only in disciplinary measures, but also in advising the students as to their courses, vocations, and avocations.

Another important source of reference is the student-health service, with an enlightened professional personnel conversant with the aims of mental hygiene and on the lookout for emotional factors in their cases. In my opinion, the work in mental hygiene should be closely bound up with the student-health service, as individuals should not be examined or treated from the standpoint of the nervous system alone, but with the health of the entire organism in mind.

A mental-hygiene program will in no way turn our universities into sanatoria. It should accomplish the opposite, weeding out for treatment elsewhere those suffering from severe mental illness, helping the milder emotional cases to make

adjustments, and educating the faculty and students so to handle their emotional problems as to insure them against nervous breakdowns.

The success of mental-hygiene work will depend not only upon the "spirit in which it is carried on and the experience of those in charge", but also upon the coöperation of the various departments of the college or university. There should be a close working agreement between every one of these, whereby information and aid should be freely offered and given. With such instruction, advice, and help, the students should profit by acquiring a better self-understanding as well as a better balance of mental functions, resulting in fewer failures, more self-confidence, and a better comprehension of what each is best fitted for and how best to reach this goal happily and efficiently. This, in turn, will react to the credit of the university, in that it will be graduating students better fitted intellectually and emotionally to cope with life. Finally, the community will profit by securing citizens—some of whom will be leaders—whose actions at home, in business, and in their professional or public lives will not be influenced by unsolved or badly solved emotional problems; whose judgment will not be warped by unfortunate maladjustments; and who will be able to face reality with eyes unblinded by psychological difficulties.

MEDICAL AND SOCIAL STUDY OF ONE HUNDRED CASES REFERRED BY THE COURTS TO THE BOSTON PSYCHOPATHIC HOSPITAL *

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PROVISION is made by the laws of the commonwealth of Massachusetts whereby persons indicted or charged with crime may be sent by the judge to a hospital for mental diseases where their mental condition will be studied and reported upon. This is provided for under Section 100, Chapter 19 of the General Laws. It is also possible for the judges to secure reports of any patient who has been in the hospital, whether he has come in under Section 100 or by the ordinary methods of admission. In fact, some of the courts prefer to have the patient sent under an ordinary physician's certificate, using Section 79, which provides for a ten-day period of observation.

The courts of Greater Boston are constantly referring cases to the Boston Psychopathic Hospital for examination as to their mental condition. This is independent of other psychiatric examinations which are provided for in certain cases. Approximately seventy-five cases a year are examined at the Boston Psychopathic Hospital and reported upon to the courts. Those so examined include persons accused of all sorts of crimes, ranging from vagrancy to murder. Men, women, and children are sent to us, and although the men predominate in numbers, that appears to be merely because there are more men before the courts. One of our youngest cases was a boy murderer of seven years of age, while at the other extreme we frequently get patients in the seventies or eighties.

* Read at the joint meeting of the American Association of Hospital Social Workers and the American Association of Psychiatric Social Workers at Des Moines, Iowa, May 13, 1927.

The present study includes one hundred cases which were referred to the Boston Psychopathic Hospital by the courts between the period of September, 1921, and February, 1923. A follow-up study of these cases was made during the spring and summer of 1926 by Miss Elizabeth Cummings as a part of her work toward the Master's degree from the School of Social Work at Simmons College. Various difficulties were experienced in trying to make a complete study of these cases. In some instances the patient had moved shortly after leaving the hospital and no further trace of him could be found; in others, friends and relatives withheld information purposely. Often it was felt that informants were giving as few data as possible. This, of course, is only natural, especially in cases in which there is a legal question involved and not simply a medical one and particularly if the individual has gotten into further difficulties or has not done well since leaving the hospital. In endeavoring to secure a complete court record of every case, further difficulty was encountered as a result of the fact that the Massachusetts Probation Commission has only a limited field of activity and has not available the complete court records. For this reason one could never be sure that the complete court record of a particular patient was obtained, since it was impossible to visit personally all the courts of Massachusetts and check up as to whether a particular patient had or had not any record in that court. Another complicating factor in endeavoring to secure complete records was the possibility of doing some harm to the patient by injudicious inquiries among his employers and associates. It would be manifestly unfair to go to an employer to secure the work record of a patient who was doing quite well and leave him with a vague impression that the patient was either insane or a criminal. All these factors complicated somewhat the study of the cases.

The relationship of psychiatry to the courts should be one of helpfulness solely. The psychiatrist should place before the judge various facts concerning the mental life of the patient which will aid in securing a proper trial for that individual and will result in a suitable disposition of his case. In general, it may be said that the courts of Massachusetts are

coöperative and feel that the psychiatrist has something definite to offer them. Differences of opinion frequently arise, as would naturally be expected considering the complicated problems that are under consideration. In taking up the cases studied, it may be worth while to see what the psychiatrist was able to offer the courts in the way of help in dealing with these problems.

Of the one hundred cases studied, eighty were males and twenty females. Twenty-eight cases were found to be insane and committable. Five more cases were considered psychotic, but not committable. There were three cases of psychoneurosis. Thirty-five were considered psychopathic personalities. Nine were regarded as feeble-minded. Three were epileptic.

In its report to the courts, the hospital gave positive recommendations in fifty-six, or slightly over half, of the cases. It recommended commitment as insane in twenty-eight cases, probation or suspended sentence in eight cases, commitment to a reformatory in three cases, and special recommendations of various kinds in seventeen more cases. In the remaining forty-four cases, it was felt that psychiatry had no special recommendation or contribution to make toward the settlement of the case beyond the positive characterization of the patient's personality and the denial of the presence of mental disease or defect.

When a case was considered to be insane and committable, the solution was of course fairly obvious, and one needs to say but little about such cases. There were, however, certain border-line cases of mental disease. In many cases it is not a simple problem nor an easy one to determine the mental state of the individual. In such cases one finds that a careful study by a social worker often yields valuable data which may establish the actual diagnosis. For example, in certain alcoholic psychoses a patient often has delusions of infidelity with regard to his wife. Suppose, then, we have a patient who has been using alcohol to excess, who shows slight evidence of alcoholic deterioration, and who accuses his wife of being unfaithful to him. It may be a difficult or even an impossible task, without data secured outside the hospital, to establish

the correctness or incorrectness of such statements on the part of the patient. Here a thorough social-service study may conclusively settle the matter one way or another.

Another difficult type of case is the patient who presents an essentially normal picture when he comes into the hospital, but gives an account of having been in an abnormal state at the time the alleged crime was committed. Here, again, we have a question of fact which is not easy to answer. In general, our tendency in such cases has been to state to the court whether or not such a claim on the part of the patient was consistent with the facts before us and in accord with our knowledge of mental disease, and to feel that the final issue was a matter of law for the judge to decide. Alcoholic psychoses, epileptic clouded states, and hysterical fugues afford examples of this type of case.

Cases 1 and 2.—Two Negroes were brought into court charged with soliciting funds under false pretenses. They were both attired in rather fantastic garb and wore their hair long, done with hairpins, and flowing beards. In the hospital they announced themselves as having been born in Palestine of royal Jewish blood, and often talked to each other in a gibberish that they called royal Hebrew, which they said was used by the prophet Daniel. They would constantly quote Bible verses, with which they were quite familiar. Even after a period of observation in hospital, it was exceedingly difficult to diagnose their exact mental condition. The patients were regarded as having a somewhat abnormal religious belief and in this respect were regarded as mild cases of a paranoid type. There was, however, no definite criterion of their honesty. These facts were reported to the court and it was stated that the patients were not committable as insane. The court placed them on probation. As far as could be ascertained, they have not become involved in further trouble, but as they were traced only to New York and Chicago, the follow-up record is manifestly incomplete and unsatisfactory. A letter from Chicago dated July 20, 1926, answered the request for further information concerning them as follows:

"My Dear Seeker of Our Welfare:

"We received your kind and welcome letter which found my co-worker (E. S.) whom you did not mention, and I, well. For I know what you say to one you mean for both, as we both were together there and will still be together, now, henceforth, and forevermore.

"The work still is great, but more Spiritual work is being performed now, according to the Scriptures. I do know that you, Gentiles, do love Wisdom, because God has said so in his written Word, which reads as follows: 'Be it therefore known unto you, that Salvation is sent unto the Gentiles, and that they will hear it.' (Acts 28:28.) And we know that that has not been as yet. It further says (in the 11th chapter of Romans) 'That Blindness in part has happened to Israel,

until the fullness of the Gentiles be come in'. And well do you know that Israel, are they, whom you Gentiles call 'colored people', which are the only people who have ever been in bondage. They are blind, therefore they are the ones who have caused us to suffer persecutions from City to City, equivalent to (Acts 13:46). These Scriptures are yet to be fulfilled, well do you know. I speak to You that know the law.

"We thank you for your kind consideration. Hoping to hear from you again.

"SELAH. ELDERS, C.S. AND D.L."

Case 3.—A young man of twenty-eight years was arrested charged with having entered the nurses' home of a hospital and having stolen some twenty-six dollars. In the Boston Psychopathic Hospital the patient denied all memory of any such act. He gave a history of epileptic attacks after which he did many odd and peculiar things, and stated that he would have no recollection of what he had done. It was verified from thoroughly reliable sources outside that the patient had such attacks and showed lapses of memory in relation to them. On the other hand, he was guilty of numerous acts of a different sort for which he had complete memory, such as impersonating an officer, for which he had served a term in the military prison in Leavenworth. He was of a very high intellectual level, securing an intelligence quotient of 122 on the psychometric test.

In the report to the court we stated that there was an absolutely reliable history of epileptic attacks, that the patient stated that at the time of the alleged crime he was not aware of what he was doing, and that there was a history of similar impulsive acts with no memory of what he had done. All this would be quite consistent with an epileptic condition, in which the patient may commit various delinquent acts and yet have no recollection of such behavior when he returns to his normal condition. On the other hand, because of the patient's absolute unreliability, it was impossible to say whether, at the time the alleged crime was committed, he was in a confused or clouded state. The patient was returned to the court and committed to the Massachusetts Reformatory at Concord on November 21, 1922. From there he was released on visit February 21, 1924, but his permit was revoked March 7, 1925, because of his leaving the state and of indiscreet conduct.

There were also eight mild cases of mental disease of a type not ordinarily regarded as warranting commitment. It is extremely difficult to advise the court properly with regard to such cases. The legal conception is one of complete responsibility or irresponsibility, and partial responsibility is not a well accepted legal concept. In such cases our practice has been to call to the attention of the court the fact that the patient shows symptoms of a mild mental disorder, to state whether the type of disorder shown seems to have any relationship to the actual crime committed, and to give the judge such facts as seem relevant regarding the prognosis and treat-

ment of cases of this type. In this group we find a number of cases of mild depressions; early cases of organic brain disease, such as senile dementia, cerebral arteriosclerosis, and general paresis, where the patients showed very slight mental symptoms as a result of the underlying organic process; and psychoneurotic conditions.

Case 4.—A married man of fifty was arrested for fornication. Under observation at the Psychopathic Hospital, he showed no intellectual deterioration, but a somewhat too placid manner. The physical examination showed that there was syphilis of the nervous system. In this case it was not felt that the patient was committable or that there was any particular relationship between the crime committed and the neurosyphilis. He was sentenced to three months in the House of Correction and released at the end of that period. No further record is obtainable.

Case 5.—This patient had been arrested ten times for drunkenness. He was admitted to the hospital in November, 1921, because of a similar charge. As a result of our examination we found that he had had a definite personality change due to a head trauma seven years before—that after this he had become increasingly self-assertive and irritable and showed a marked inability to tolerate alcohol. These facts were reported to the court, and it was suggested that probation or a suspended sentence should be given him. Since that time the patient has been arrested twice for drunkenness, once in 1922 and once in 1923. He was required to serve two months in the county jail in 1923. A follow-up visit by a social worker showed that for the past three years he has not been drinking at all, that the family has kept him under very careful supervision, that he helps his wife about the house and submits to constant supervision from his family.

Case 6.—A widow of sixty-eight was arrested for shop-lifting. When she was brought to the hospital, it was found that she had cerebral arteriosclerosis, that she was mentally unstable, and that she showed slight impairment of memory. She had had numerous quarrels with her daughter-in-law and after one such quarrel left the house, planning to commit suicide, but changed her mind and went into a department store and stole some handkerchiefs with the idea of revenging herself on her daughter-in-law by disgracing the family in this manner. It was recommended to the court that if the family situation could be straightened out, the patient would probably get along all right. She was placed on probation by the court. A social-service follow-up study shows that the patient's arteriosclerosis has progressed, that the family situation is still somewhat unsatisfactory, and that the patient appears rather tense and slightly depressed. She is resentful toward her daughter-in-law. Nevertheless, her outward behavior is reasonably satisfactory.

Case 7.—A married woman of thirty-four was arrested as a common railler and brawler and sent to the Psychopathic Hospital for observation. The patient had been subject to marked swings of mood. At times she was a little elated, overactive, and irritable, and at these times she

tended to get into difficulty and to feel that people were against her. Her difficulty with her neighbors was regarded as due to this condition, and it was recommended that the patient be placed on probation or given a suspended sentence. A social-service study shows that the patient has since then had further swings of mood, and that during her spells of mild excitement, she is exceedingly difficult to get along with. The whole family situation, however, is adjusting itself in a much more satisfactory manner.

Case 8.—A married man of forty-eight was sent to the hospital because, following his arrest for drunkenness, he had attempted to commit suicide in jail. He was in a somewhat delirious condition when admitted, but this condition cleared up within twenty-four hours and he showed quite normal behavior. It was felt that his suicidal attempts had been made while he was suffering from an alcoholic psychosis. He was placed on probation by the court. The social-service study shows that since leaving the hospital, the patient has been working steadily and has had only one arrest for drunkenness. He does not, however, get along well with his wife. He himself is exceedingly domineering and aggressive and the wife is regarded by all who know her as a very difficult person to get along with.

Case 9.—A married man of thirty-three was arrested for assault and battery on his wife and was sent to the Boston Psychopathic Hospital for study because he was said to have had a war neurosis. A study of the case at the hospital showed that the patient had been much more unstable emotionally since his army service and that he was somewhat run down physically because of severe malaria which he had while in the army. Although the patient was not psychotic, further hospital treatment was recommended. It was reported to the court that the patient showed emotional instability due partly to war experiences, partly to physical ill health. The patient was put on probation by the court and later reports indicate that he and his wife are getting along reasonably well.

Case 10.—A boy of nineteen was picked up by the police standing in a doorway with a large bunch of keys and a glass-cutter in his hand. He could give no satisfactory explanation as to why he was there or why he had the keys. He was sent to the Boston Psychopathic Hospital for observation. A study of the case showed that the patient had had an argument with his stepfather who had told him to leave the house and never return. The patient was without funds, had no place to go, and in addition had a very deep attachment for his mother. He left the house, wandered about in a dazed and confused way, and had no recollection of what occurred until brought to the hospital by the police. In hospital his mental condition cleared up rapidly. He disappeared soon after leaving the hospital and no further record of him could be obtained.

Feeble-mindedness represents a problem which probably appears relatively simple to the average social worker. In general, we think of the feeble-minded individual as one who is so lacking in intelligence that he is not able to make an average

or normal adjustment to life. But closer investigation shows that we have no thoroughly satisfactory definition of feeble-mindedness, and that certain defects and flaws are to be found in every attempt to define it. Terman states that "the definition in most general use is the one framed by the Royal College of Physicians and Surgeons of London and adopted by the English Royal Commission on Mental Deficiency". It is substantially as follows:

"A feeble-minded person is one who is incapable, because of mental defect existing from birth or from an early age, (a) of competing on equal terms with his normal fellows; or (b) of managing himself or his affairs with ordinary prudence."

A second definition of a similar nature defines feeble-mindedness as a "state of mental defect existing from birth or from an early age and due to incomplete or abnormal development in consequence of which the person affected is incapable of performing his duties as a member of society in the position of life to which he is born".

These attempts to define feeble-mindedness in terms of ability to adjust to environment allow for no absolute standards. A person who is normal in one environment becomes feeble-minded if changed to a different environment.

With the development of the Binet scale, endeavors have been made to find some arbitrary standard of intelligence which might be used as a dividing line between the normal and the feeble-minded. Terman first settled upon a mental age of 16 years as representing average adult intelligence. On the basis of this the American Association for the Study of the Feeble-minded defined feeble-mindedness as a condition in which the individual (if sixteen years of age) had a mental age of 12 years or less or an intelligence quotient of 75 or less.

Reading through the standard textbooks leaves one hopelessly bewildered. Goddard would accept a mental age of 12 or less as indicating feeble-mindedness. Watt says, "Adult defectives who cannot pass the Binet tests for normal twelve-year-old children ought, both for their own and for the community's sake, to be segregated." Terman says, "All who test below 70 I.Q. by the Stanford revision of the Binet-Simon scale should be considered feeble-minded, and it is an open

question whether it would not be justifiable to consider 75 I.Q. as the lower limit of 'normal' intelligence. Certainly a large proportion falling between 70 and 75 can hardly be classed as other than feeble-minded, even according to the social criterion." Maxfield thinks "that $9\frac{1}{2}$ years is a fairly satisfactory line of division for our native-born white adults. If an adult makes a Stanford-Binet mental-age score below this, he is probably feeble-minded. If he makes a score above this, he is to be classed as feeble-minded in less than 50 per cent of the cases tested."

It is apparent that there is no commonly accepted mental age or intelligence quotient that denotes feeble-mindedness. Nor is there even agreement as to what constitutes normal intelligence. Terman's standard of 16 is undoubtedly too high. A mental age of 14 years or an intelligence quotient of 87 is a more accurate representation of average adult intelligence. It has also been shown that a mental age of 10 years or an intelligence quotient of $62\frac{1}{2}$ is not inconsistent with ability to get along satisfactorily outside an institution.

Still another way of trying to determine and define feeble-mindedness is to assume that a certain percentage of the population is feeble-minded and then work out the intelligence quotient for this group. The figures commonly used for this purpose are 3 per cent and 2 per cent.

According to studies made in the army, using the army Alpha test, the lower 3 per cent of our population have a mental age of $10\frac{1}{2}$ years or less, while the lower 2 per cent have a mental age of 8 years or less. According to the same tests, over 15 per cent of our population have a mental age of 12 years or less. If we accept the original definition of feeble-mindedness as representing a mental age of 12 years or less, it would appear that over 15 per cent, or nearly one-sixth, of our population is feeble-minded. Such a conception of feeble-mindedness would make the term of no practical use.

An attempt to formulate feeble-mindedness as a clinical diagnosis, to be made only after a study of a number of data, of which the psychometric test is only one, was made by the late Walter E. Fernald. Dr. Fernald devised a plan whereby ten data were considered. These were arranged as follows:

1. Physical examination.
2. Family history.
3. Development history.
4. School progress.
5. Examination in school work.
6. Practical knowledge.
7. Social history.
8. Economic efficiency.
9. Moral reactions.
10. Psychological (psychometric) tests.

It will be seen, therefore, that a diagnosis of feeble-mindedness is something more than making a psychometric examination. It is a diagnosis that can be made only after a careful and thorough study of many factors.

Case 11.—A boy of fifteen was arrested for larceny on July 7, 1922. He had previously been arrested in May, 1918, for larceny, breaking, and entering, and had been placed on probation. He was again arrested May 22, 1919, on the charge of deliberate injury to building and the case was filed. When sent to the Boston Psychopathic Hospital, a psychometric examination gave him a mental age of 8 $\frac{3}{12}$ years, with an intelligence quotient of 52. On the basis of a poor make-up, it was recommended that he be sent to an institution. In November, 1922, he was committed to the Department of Defective Delinquents at the state farm. The report from that institution shows that the patient has gotten into a great deal of trouble there, although he is regarded as a diligent and excellent worker.

Case 12.—A colored man of twenty-seven was arrested for having assaulted a girl and stabbed her three times with a penknife. Examination at the Psychopathic Hospital showed that he had a mental age of 9 $\frac{4}{12}$ years with an intelligence quotient of 58. There was a long court record, the patient having been arrested some thirteen times in the preceding five years, charged with drunkenness, larceny, assault and battery, and rape. It was recommended that he be committed as a defective delinquent because of his low intelligence and his criminal record. A report from the Department of Correction shows that he is a good workman and fairly energetic, but that he has frequently been reported for misconduct.

Case 13.—A girl of twenty was sent in by the court on the technical charge of being a stubborn child. Psychological tests gave her a mental age of 10 $\frac{5}{12}$ years with an intelligence quotient of 65. The history showed that she had always been queer and different from other children. There was a history of sex promiscuity, and at the time of admission, she was seven months pregnant and had gonorrhea. It was recommended that she be given institutional care. The court committed her to the Walter E. Fernald State School, where she is getting along quite well. Her family have made repeated requests for her discharge from the school, which have not been allowed.

Patients with psychopathic personalities of various types are one of the most difficult groups for the psychiatrist to deal with. Psychopathic personality may be defined as such a degree of defect in the non-intellectual attributes of the personality (principally the emotions and instincts) that the person is unable to make an average or normal adjustment to life. This stresses the difference between the feeble-minded or intellectually inferior and the psychopathic or emotionally inferior.

The same difficulties that arise with regard to the diagnosis of feeble-mindedness occur in the diagnosis of psychopathic personality. It is even more difficult to determine the normal limits for emotions and instincts than it is for intelligence.

What shall be the attitude of the psychiatrist in reporting to the courts on such cases? It has been advocated by some that if a person has a psychopathic make-up, that should excuse his misdeeds and he should not be considered responsible. The New York courts have rejected this view, pointing out that it would allow any criminal who could prove that he was extremely depraved to secure thereby immunity from punishment. Another view, which starts on a different basis, but reaches somewhat similar conclusions, is that behavior is almost entirely the product of environment and that personality contributes almost nothing to it. Those holding this view feel that society is to blame, not the individual, and are, therefore, opposed to punishment of the criminal. It is undoubtedly true that punishment and fear of consequences are not as strong deterrents from crime as we might wish, yet, as far as psychopaths are concerned, other methods of dealing with them would seem to bring no better results.

In a large percentage of such cases, the psychiatrist can only point out to the court the abnormal make-up of the patient. Particularly in cases that are more or less of the moral-imbecile type, it would seem that leniency is undesirable. Fear is an important incentive to behavior and in some cases it seems to be the only method we have, although it is admitted that such may not always be the case. In certain selected cases, parole or a suspended sentence may seem indicated, but the psychiatrist should be exceedingly cautious about making such recommendations.

Case 14.—A marine, nineteen years old, was arrested and charged with murder. Because of the fact that the crime was committed impulsively and with no apparent motive and the patient refused to give any reason for it, he was sent to the hospital for observation. In the hospital he assumed a very stoical attitude—said that he was guilty and wanted to be punished immediately. He would give no reason for having committed the murder and said that he did not care to discuss the matter. Special tests showed that he was of quite superior intelligence. Motivation of the crime apparently was related to an episode a few days before in which the murdered man had struck the patient, and possibly to the peculiar homosexual and masochistic personality of the patient. The account of the actual committing of the murder is perhaps worth repeating as well as the patient's sexual ideas.

The patient's own account of the trouble: "R. [the murdered man] was not the great bully he is represented as being, although somewhat inclined that way. We were mere acquaintances. His manner of talking about women was less coarse than that of many of the other fellows. He was a boxer, but not a very skillful one.

"R. and I were washing side by side and we passed some casual remarks. I had attempted a witticism about some one borrowing his toothbrush, but what really caused the trouble was my failure to reply to something R. said to me a few minutes later. When I later said, 'Pardon me for not attending to your remarks', R. thought my tone sarcastic and struck me twice on the jaw, knocking me down. I told him that it was unsportsmanlike to strike a man with a bandaged right hand. He then said he was sorry he hit me. At the moment I felt no pain from the blows and no immediate anger. I felt slightly amused. I felt some slight mental confusion. After one of the fellows had said to me, 'That was a dirty trick of R's', my anger arose and I ate no breakfast. I nursed this feeling of anger for three days.

"On the night of the trouble I was patrolling a night watch. For the first three hours and a half, I was thinking of anything and everything. Then in the last half hour sprang up the intention of killing R. and then giving myself up. The deed somehow seemed inevitable, but no external power imposed it on me. I was conscious that I could have controlled it. It was an act in cold blood. Yet, at the same time, I felt pity for R. I felt sorry for what he was to suffer through my act. My mental state at the time embraced diverse elements, so that I was somewhat confused. I don't mean, however, that I was in an epileptic state or a trance. At the time I was not conscious of any motive. It was simply something to be done. It was compulsive. The dominant motive was to vindicate my honor, to regain the esteem of my mates, which I had lost through my passive acceptance of R's aggression.

"The inevitable consequences—that is, at least fifteen years in prison—never occurred to me. If it had, it would probably have deterred me from the deed. I was in a state of high tension, the need of relief was imperative. The deed afforded the necessary relief."

The patient stated that if the quarrel in the wash room had been with any one else than R., he probably would have done the same thing.

He stated that he had frequently committed what he called "mental murders".

In regard to sexual matters, the patient gave the following account: "Up to fourteen years of age I cared more for girls than for boys. Then I lost my genuine affection for girls, while that for boys grew strong. This change was probably due to the fact that since my mother was dead, I naturally gave my strongest affection to my father and older brother. From them I transferred these feelings to others of my own sex. When I become despondent, I have a strong craving for sympathy, for display of affection. If this is given me at such times, I become irritable and quarrelsome with the very person whose affection I seek. However, I never felt any desire for physical proximity."

A great many more facts were obtained from the patient in long interviews, but the above are the more important ones.

It was reported to the court that the patient was an individual of rather peculiar and special personality and he was classified as a psychopathic personality. The patient was sentenced to life imprisonment in the Federal Penitentiary at Atlanta, where he now is. While awaiting trial, he made a suicidal attempt, cutting both wrists, and was committed to the Bridgewater State Hospital. After a stay of nine months, he was sent back to jail as not insane. A report from the Federal Penitentiary states, "It appears from the patient's record that as long as he is allowed to do the work he wants to, he can behave himself. After being assigned to the prison band, he has had no reports for misbehavior for twenty-one months." He is regarded as peculiar by the doctor in the penitentiary.

Case 15.—A colored boy of seventeen was arrested by the police for eavesdropping. He had been arrested for a similar offense a few months before and about a year before he had been arrested for breaking and entering. He was sent to the hospital for observation. He was found to be of normal intelligence, but showed considerable sex promiscuity and had indulged in various perverse sex practices. He admitted frankly that he had been peeping in windows to see if he could see girls changing their clothing. It was reported to the court that he was a case of psychopathic personality. No special recommendation was made in the case. The court placed the charges on file. In February, 1923, he was arrested for breaking and entering and larceny. He was sent to the Massachusetts Reformatory, where he got along fairly well, and was released on permit December 15, 1924. In April, 1926, he was again arrested for breaking and entering and larceny. He was returned to the Massachusetts Reformatory, where he is at the present time.

Case 16.—A young man of twenty-one was arrested because he had given a check for \$2,700 for a new automobile and stated that he wished to buy ten more cars, drawing a check for \$300 to cover a \$100 deposit on three cars. The whole thing was done in such a crude and childish way that the automobile company realized that he was not normal. They had him arrested and he was sent to the Boston Psychopathic Hospital for observation. The examination at the hospital showed that he had always had a great tendency to fabricate fantastic

tales with regard to his own prowess and wealth. In one letter, he wrote to a young lady, telling her that he owned many airplanes, yachts, and automobiles and that he would call for her to ride in whichever one she preferred. The Stanford test gave him a mental age of 14 11/12 with an intelligence quotient of 93. The patient seemed quite cheerful and unconcerned, even when his inconsistent, contradictory statements were pointed out to him. He claimed that he had no memory of what had happened for a period of ten days prior to his admission to the hospital. This was regarded as another one of his lies and it was reported to the court that he was a psychopathic personality of the pathological-liar type, and parole or suspended sentence and contact with a hospital clinic were recommended. The patient was placed on probation by the court and continued through his period of observation without getting into any further difficulties.

Case 17.—A young woman of twenty was sent in from the court with a charge of lewd cohabitation. In the hospital she was a little keyed up and somewhat talkative. She admitted quite freely using alcohol to excess and being sexually promiscuous on numerous occasions. A Stanford test gave her a mental age of 12 1/12 years with an intelligence quotient of 76. Performance scale gave a median age of 8 years. Because of her limited intelligence, her poor adjustment, and her emotional instability, she was diagnosed as a psychopathic personality and it was recommended that she be sent to the Sherborne Reformatory. She was admitted to the Reformatory on November 22, 1922. She remained there until November, 1924. A great deal of material was unearthed about her past life and essentially a psychoanalytic study was made which seemed to result in marked improvement. On leaving the reformatory, she did quite well for a while, but in October, 1925, she again became promiscuous sexually, left Boston without permission, and went to Washington, where she married a man she had previously known. Her husband is apparently a respectable man and they are getting along well.

Case 18.—A young man of twenty-five was brought into the hospital after having been placed on suspended sentence on a charge of exhibitionism and criminal assault. The history of the case showed that he had been indulging in sex activities since the age of nine and that for several years he had made a practice of handling small girls. The patient was of low-average intelligence, getting an intelligence quotient of 82. He talked matters over in a very free and frank manner, stating that he wished help, that he realized these tendencies, but was unable to overcome them. He himself suggested that he should be kept in hospital for a period of several years in order to prevent a recurrence of this sort of activity. This was reported to the court and it was suggested that he be allowed to stay as a voluntary patient in a state hospital while the suspended sentence was continued. He was committed by the court as a defective delinquent on October 19, 1922. His record at this institution is fairly good. He is reasonably industrious and except for one period when he gave some trouble, there has been no difficulty.

Case 19.—A young woman of twenty-three was arrested, charged with larceny from a department store. The patient was said to have ordered

things by telephone in another woman's name and to have had them sent general delivery. When she went to get the parcels, she was arrested. Examination in the hospital showed that she did very poorly in psychometric tests, although she was said to have completed the third year in high school. She received a mental age of 11 $\frac{7}{12}$ years with an intelligence quotient of 72 on the Stanford scale. In the performance test she made a median of 9 years. While under observation in the hospital, she was quiet and well behaved and showed no peculiar behavior. There was a history of a number of odd and eccentric things which she had done in the past, but neither the patient nor her mother appeared to be reliable informants. The patient claimed to have no memory of having ordered the goods from the department store and said that she simply felt impelled to go to the general delivery to ask if there was a parcel for her. She was regarded as a case of psychopathic personality and it was recommended that she should have institutional care for a prolonged period. She was placed on probation by the court, but in September, 1925, she was again arrested for larceny and committed to the Sherborne Reformatory, where she now is.

Case 20.—A colored man of twenty-five was arrested, charged with lewd and lascivious conduct. He had worked as a house man in a private home and was said to have had homosexual relations with a number of boys in the neighborhood. While in the hospital, the patient admitted these homosexual practices, although he sought to minimize them. Investigation by the social-service department showed that he had evidently seduced a large number of boys in the neighborhood. A psychometric examination gave him a mental age of 11 $\frac{3}{12}$ years, with an intelligence quotient of 70. The blood Wassermann test was positive for syphilis.

It was reported to the court that the patient was a homosexual individual of limited intelligence who had syphilis, and no special recommendations were made. He was committed to the Concord Reformatory in June, 1923, on an indeterminate sentence limited to five years. He was released on permit November 28, 1923. The patient could not be found (May, 1926) although it was learned that he had been working in several different places and that up to about three months before the inquiry he had apparently gotten along without any trouble.

Epilepsy presents many problems. Does the "epileptic personality" described by numerous writers entitle a person to special consideration by the court? What about acts committed in a clouded epileptic state? Just when does an epileptic become insane and committable? These are not easy questions to answer, and even a thorough study of a case may leave one undecided in some respects.

Case 21.—A married man of thirty-three was sent into the hospital from the court with the statement that he had knocked over a stove in a store, had attacked a woman, seizing her by the throat, and had resisted the police officers. In the hospital it was found that he was a typical case of epilepsy, that after some of his attacks he would

have spells when he would be confused for a few minutes, and that the episode that had led to his coming to the hospital was such an attack. When admitted to the hospital, he was brought in by four policemen. He was in handcuffs, tied, and was struggling wildly. He was placed in a pack and went to sleep in a few minutes. Within twelve hours after admission to the hospital he had returned to his normal state. These facts were reported to the court and he was discharged. A follow-up visit by the social service shows that the patient is working steadily, that he gets on reasonably well with his family, and that he has epileptic attacks about once in three months.

Case 22.—A girl of fifteen was brought into court as a stubborn child with the statement that she was disagreeable at home, that she would not mind, and that she was unmanageable. Careful examination showed that she had epileptic convulsions, that her irritability and outbreaks of temper were doubtless due to her epileptic make-up. It was recommended that she be committed, and she was committed to the Monson State Hospital. A report from there four years later states that she has frequent convulsions and shows marked deterioration.

The following case shows how a boy who was badly adjusted in his home life and who was becoming more and more anti-social in his behavior was finally adjusted.

Case 23.—A boy of seventeen was arrested for stealing automobiles and was sent to the Boston Psychopathic Hospital for observation. Investigation showed that his mother had died when he was seven years old. He then went to live with an aunt where conditions were not satisfactory. He did very poorly in school, often staying away from school for several days at a time. He would also leave home and not return for several days. He associated with an undesirable group of boys, and one night they broke into a house and stole some things.

When the patient was eleven, his father remarried and the patient returned home to live. He did not get along well with his stepmother, and continued to associate with undesirable companions. His school work was even less satisfactory than before and he was required to repeat the first year in high school. About six months before admission, he took an automobile and went joy-riding in it. He was arrested and placed on probation. Just before coming into the hospital, he repeated the offense. In hospital the patient showed a frank, coöperative attitude. He was extremely interested in automobiles and would become quite tense and emotional in discussing them, which he did at every available opportunity. A plan was worked out for him to drive the car of a probation officer and to report regularly to our out-patient department. The court approved of this and placed him on probation. After a few months he secured a position as chauffeur for a private family. He has gotten along quite well since then, as the following letter from his father indicates:

"Married nearly three years ago, has two children. He now is the full equal of any of my children—a fine fellow, honest and reliable. As far as I know he has never done a wrong thing since he was with you.

He is twenty-two, has a very good home, maintains it himself. He is learning the carpenter's trade as an apprentice and has nearly completed the first year. This is one case that the hospital saved from jail and it saved a fine boy, and you can readily understand that it is much appreciated by me."

CONCLUSIONS

One hundred cases referred by the courts to the Boston Psychopathic Hospital have been reviewed critically after a period of about four years. This review has included a careful follow-up study by a trained psychiatric social worker. The results may be summarized as follows:

1. Psychiatry has a definite contribution to make toward the understanding of crime and in the disposition of prisoners. In most cases, the Massachusetts courts appear to accept this conclusion and to have a coöperative attitude.

2. In most of the cases of this series, the diagnoses and recommendations appear to have been correct according to data obtained from our study of four years later. In some cases, where the hospital has recommended parole or suspended sentence with supervision by our out-patient department, the patient has gotten into further trouble. While this might be regarded by some as evidence of poor advice by the hospital, it appears to us that the hospital should recommend such trial in a number of doubtful cases. The fact that some cases have done well where the court has completely disregarded our advice demonstrates that the psychiatrist is not infallible.

3. There seems to be an enormous duplication of effort by psychiatric clinics. Cases that have been thoroughly studied at one clinic are brought to another clinic. Only after a complete social-service investigation is it found out that the patient has been to another clinic. One reason for this is that relatives, dissatisfied at the recommendations of one clinic, hope to secure a more satisfactory (to them) recommendation by trying another clinic and saying nothing about the previous examination.

THE UNGRADED ROOM IN KANSAS

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THE ungraded room is an institution that has been developed in the United States during the last three decades. Historically, the special classes for backward children were intended primarily for truant and incorrigible boys. Such classes were organized in New York City as early as 1874. A school of this type was established in Providence, Rhode Island, in 1894. Investigation revealed that the special class in Providence contained a large number of mentally deficient children. As a result of this disclosure, a special school for backward pupils was established in 1896. The general usefulness of this class was quickly evident. Thereafter other cities in rapid succession proceeded to organize such classes.

The first state law requiring special education for backward children was passed in New Jersey in 1911. Since then many other states have enacted similar laws. Most of these laws make it obligatory for school boards to provide special education in any district in which there are ten or more children who exhibit three or more years of retardation in mental development.

A dominant purpose of the early ungraded room was the restoration of retarded pupils to their regular grades. A pupil retarded in his studies was placed in the ungraded room for special help. Although a few opportunity or restoration cases are still retained, the present ungraded room is, actually, a school for feeble-minded children. Elizabeth Farrell¹ found that 404 out of 815 ungraded children tested in New York City had I.Q.'s below 70. Woodrow states, "The pupils in these ungraded classes are chiefly feeble-minded children, usually of the moron grade."² Compulsory-education laws, with their enforcement, have brought into the schools in recent years

¹ "Psychological Examinations and Educational Tests", by Elizabeth E. Farrell. *Ungraded*, Vol. 7, pp. 1-12, October, 1921.

² *Brightness and Dullness in Children*, by Herbert Hollingsworth Woodrow. Philadelphia: J. B. Lippincott Company, 1919. p. 270.

more and more children of restricted ability. The ungraded room, therefore, has met a real need.

In order to ascertain the frequency and general status of ungraded rooms in Kansas, in January, 1926, a questionnaire was sent to the superintendents of every first- and second-class city in Kansas, with the exception of one or two cities in which the data were obtained by personal interviews. Since third-class cities are not likely to have ungraded rooms, such cities were not included in this survey. Out of a total of 84 questionnaires sent out, replies were received from 65. Ten of the cities have ungraded rooms. An interesting feature of the investigation was the interest displayed by the superintendents in this study. Several expressed the intention of putting these rooms into their school systems in the near future and indicated that a conspicuous need for them existed.

The first topic in the questionnaire dealt with the number and sex of the ungraded pupils. The total number of cases reported was 416—272 boys and 144 girls. The average enrollment per room was 16 pupils. According to estimates of the frequency of low intelligence quotients, it appears that less than 6 per cent of the feeble-minded pupils in Kansas are segregated in ungraded rooms. A still more interesting finding is that at least three first-class cities have no classes of this type. The child with an intelligence quotient of 70 or lower is placed in the class with the child with an intelligence quotient of 120 or more. The problem is partially solved in a few Kansas cities by sectioning pupils in the elementary schools on the basis of group intelligence scores. This method, however, does not provide adequately for the pupil of extremely restricted ability.

The boys outnumber the girls nearly two to one, yet Hollingworth,¹ Terman,² and others have not found marked sex differences in intelligence. It is evident that girls are not being detected as frequently as boys by the present methods employed in Kansas. There are 28 colored pupils included in the total ungraded enrollment of 416.

Four of the schools select pupils for the ungraded rooms

¹ *The Psychology of Subnormal Children*, by Leta S. Hollingworth. New York: The Macmillan Company, 1920. p. 9.

² *The Measurement of Intelligence*, by Lewis M. Terman. Boston: Houghton Mifflin company, 1916. p. 68.

solely on the basis of the I.Q.; one employs the criterion of retardation, one the recommendations of the teacher, and 17 utilize retardation, recommendations of teacher, and I.Q. It is evident that the intelligence-test results exert a major influence in the commitment of children to these rooms.

Nineteen of the ungraded rooms contain opportunity or restoration cases. The average return of such pupils is 3 per year. These data, however, may be unreliable, as pupils not regularly enrolled in the special class come often to this room for special help. Few of the pupils regularly enrolled in the ungraded rooms are restoration cases according to the reports of the teachers.

Review of the literature reveals the tendency to unload disciplinary cases in the ungraded rooms. This is not a common practice in Kansas, however. Only two schools reported the enrollment of disciplinary cases.

A study of the intelligence quotients tends to confirm this conclusion, as the mean intelligence quotient of the typical ungraded room is about 66. The range is from 30 to 107.

Eighty-five per cent of the schools spend at least two-thirds of their time in academic instruction of the conventional sort. Wallin¹ recommends that only 35 per cent of the school day be devoted to literary work. Goddard says, "The three R's are almost entirely out of place with children who are mentally defective." There is evidence that entirely too much time is devoted to academic work of the conventional sort.

Arithmetic, reading, spelling, language, and writing are taught in all the schools. Over three-fourths of the schools teach geography and history. It is doubtful whether a pupil who reads no better than a third grader can get any lasting good from geography and history. It is possible, however, that the geography and history are used as supplementary reading lessons, which may justify their inclusion in the curriculum.

Data were assembled regarding the preparation of the teachers. It is generally admitted that to instruct subnormal children efficiently, special training is needed. Goddard² says,

¹ *The Education of Handicapped Children*, by J. E. Wallace Wallin. Boston: Houghton Mifflin Company, 1924. p. 144.

² *School Training of Defective Children*, by H. H. Goddard. Yonkers, N. Y.: The World Book Company, 1914. p. 26.

"Nowhere are good teachers so valuable, and nowhere are poor teachers such utter failures and capable of doing so much harm."

Out of a total of twenty-six teachers, nineteen hold no college degrees; six have Bachelor's degrees; one a Master's degree. However, 50 per cent of the teachers have had at least three years of college training.

Nineteen of the twenty-six teachers have college credit in psychology, a condition effected probably by a state law requiring all teachers who hold a three-year certificate to have college credit in psychology. The next group of subjects studied by over 50 per cent of the group includes child psychology, mental tests, educational psychology, and educational measurements. The teachers, as a group, seem to have a fair general training along psychological lines, but they lack specific training in courses related to their work. Few have taken courses in mental testing, in psychological- or educational-clinic work or work with non-typical children, or in abnormal psychology.

Five of the teachers have had special training in schools such as that operated in connection with the institution at Vineland, New Jersey.

The average amount of teaching experience is ten years. The average amount of experience in ungraded rooms is four years.

Nearly all of the teachers devote the entire school day to the ungraded room exclusively. Only three teachers reported duties in addition to those of the ungraded room.

An investigation of the educational achievement of ungraded pupils in three representative types of Kansas cities was made. The cities studied in this regard were Kansas City, Topeka, and Lawrence, which are typical of the large, medium, and small cities of Kansas.

In March, 1926, the Stanford achievement test form A was given to the ungraded pupils in the above mentioned cities. The procedure was carried out as prescribed in the manual of directions. The pupils were tested in reading, including paragraph, sentence, and word meaning; in arithmetic, including reasoning and computation; and in spelling. In nearly every

room a few extreme cases were found who could do nothing with the test. Some of these subnormals could neither write nor read the simplest words. The tests were given in five rooms in Topeka, four in Lawrence, and three in Kansas City, Kansas. The Binet intelligence quotients and the mental ages and dates of birth were obtained for all of these pupils, numbering 146. The mean chronological age of the group was 12 years, 6 months; the mean mental age, 8 years, 1 month; and the mean educational age, 8 years, 3 months.

The mean educational and mental ages are nearly identical, indicating uniform general inferiority on the part of the group. The group does not exceed low third-grade standards. Another noteworthy fact is the extreme range of the chronological ages. This covers sixteen years. The mental and educational ages, however, have a range of less than ten years.

The mean subjects ages were as follows:

<i>Subject</i>	<i>Mean age</i>
Reading	
Paragraph	8 years, 4 months
Sentence	8 years, 3 months
Word	8 years, 6 months
Arithmetic	
Computation	8 years, 5 months
Reasoning	8 years, 2 months
Spelling	7 years, 7 months

Comparison of the mean educational ages in each of the subjects reveals no conspicuously strong or weak subjects. Rather a *general* inferiority in academic attainment is the chief characteristic of the group. The best results are in word meaning and arithmetic computation. Spelling, arithmetic reasoning, and sentence comprehension are the poorest.

The writers offer these data as exemplifying the present status of educational provision for children of restricted ability in Kansas. The data are subject to the common errors attendant upon the utilization of the questionnaire technique. The writers feel, however, that the data are enlightening and indicative of the general situation to be found in Kansas. They have refrained from speculation upon the *needs* of Kansas in several regards clearly indicated by the results. To the reader, these needs must be apparent at once.

THE PLACE OF THE MOBILE CLINIC IN A RURAL COMMUNITY *

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THE extension of various types of psychiatric service into the small towns and rural districts of the country has not lagged as far behind the development of psychopathic and child-guidance clinics in the larger cities as might be expected in view of the well-known difficulty of establishing health work or social service in communities where the population is widely scattered and funds are difficult to secure. A number of states, usually with the assistance of some outside group such as The National Committee for Mental Hygiene, have undertaken mental-hygiene surveys as a basis for a legislative or building program for the adequate care of their insane, epileptic, and feeble-minded. State societies for mental-hygiene have carried on educational work in many smaller communities and have established clinics to be taken over later by local agencies. Private foundations have supported county-wide demonstrations in mental hygiene in connection with general health programs for children. State departments of public welfare have employed psychiatrists to give mental examinations in the state wherever requested, and some colleges and universities have offered a limited psychological service to the public schools in connection with their extension work.

Adequate psychiatric-clinic service is also gradually becoming available to communities at a distance from the larger centers of population. Connecticut, the seat of the first state society for mental hygiene, has made notable progress in the establishment of local clinics in several of its smaller cities. In other states various types of traveling clinics are being developed. A number of the state hospitals now hold

* Read at the Fifty-fourth Annual Meeting of the National Conference of Social Work, Des Moines, May 18, 1927.

regular clinics in different parts of their districts to which not only paroled patients, but also children and border-line cases in the communities visited come for consultation. In Massachusetts, the state hospitals have undertaken to carry out the provisions of the law for the compulsory examination of all children in the state who are three years or more retarded in school, and clinics for such children are conducted on a state-wide basis. In Illinois, the Institute for Juvenile Research at Chicago, functioning under the state department of public welfare, detaches members of its staff from time to time to make mental-hygiene surveys or to hold clinics in certain of the smaller cities of the state. The Colorado Psychopathic Hospital has been working closely with the state health bureau in its traveling child-welfare clinics and has given psychiatric examinations in from 10 to 12 per cent of all the cases surveyed. Minnesota maintained a psychiatric unit in the field for a year as a step toward the establishment of a state psychopathic hospital, but was obliged to discontinue it because of lack of further appropriations.

The Iowa experiment with a mobile mental-hygiene clinic differs from these others in several respects. It was undertaken by the State Psychopathic Hospital in January, 1926, for a period of two years with a twofold aim: first, to determine the need and the feasibility of providing such a psychiatric service for the state in addition to the hospital and out-patient services offered at Iowa City; and, second, to supplement the research program of the hospital through field studies of problem material, particularly as encountered in the schools. In support of the latter project, funds were secured from the Division of Studies of the Rockefeller Foundation which enabled the hospital to organize a special research unit of workers and also a field unit, the latter consisting of a psychiatrist, a psychologist, two psychiatric social workers, and a secretary, who have been assisted from time to time by graduate students in psychology and in sociology from the university. The director of the psychopathic hospital and an executive assistant have supervised the administration of the program, and the latter has acted as field organizer for the mobile clinic. The mobile-clinic staff have devoted their full time to the clinics in the field and have of-

ferred consultations both to adults and to children, with no restrictions upon the type of mental problems that might be presented to them. This field unit is at the same time an organic part of the psychopathic hospital, intimately sharing its resources and facilities and taking an active part in its research program. The Extension Division of the State University of Iowa has paid the traveling expenses and has provided the supplies for the field unit, and the communities visited have contributed toward the maintenance of the staff while in their district.

It was decided at the outset that the field unit would visit only those communities in which invitations were forthcoming from enough representative groups to insure a wide selection of cases and adequate coöperation in carrying out recommendations. During the past year and a half, inquiries have been received from twenty or more places and nine invitations for clinic visits have been accepted. Four of these clinics have been held in counties in which the largest towns had populations of from 3,600 to 9,000 and two in cities of 36,000 each. One clinic was held in connection with the ungraded classes in a larger city, and two at the state orphanages at Toledo and Davenport. In the community clinics, the initiative in securing the clinic was taken by the local social worker in four instances, by the school nurse in one, and by the school director of child study in the other.

Preliminary organization for the clinic usually proceeds about as follows: After correspondence and conferences with the hospital executives, the local worker presents the project to such groups as the social-service-league board, the council of the parent-teacher association, the board of county supervisors, and the county medical society, to the superintendent of schools and the mayor, judge, county attorney, and other leaders in the community. After several of these individuals and agencies have become sufficiently interested to make definite requests for the clinic and to offer their support, the field organizer visits the community to determine the extent of the local interest and the availability of its resources. If conditions are judged favorable for a clinic, the organization of a representative local mental-hygiene committee to complete the arrangements is suggested. Such a committee then takes

steps to secure a fund of several hundred dollars for the local expenses of the clinic and assists in finding suitable headquarters and living accommodations for the staff. Contributions to these local funds have been received from social-service leagues, school boards, county supervisors, county medical associations, public health councils, Christmas Seal committees, parent-teacher associations, and from private sources. Headquarters have been established in city halls, courthouses, school buildings, and offices of social agencies, and rooming and boarding places for the staff have been secured in private homes.

Shortly before the clinic staff is scheduled to arrive, the field organizer visits the community to complete the arrangements and to help the local committee with some general publicity. This has been restricted for the most part to detailed explanation of the project to various interested groups and to newspaper accounts of these talks. Community meetings have been arranged at which the director of the hospital has presented the clinic program, and he has also met with the county medical society, with groups of teachers, and with the business men's organizations in each center of work upon their invitation. The clinic staff have been called upon to address various clubs during their visit, but have not undertaken a program of general mental-hygiene education through formal series of lectures or study groups. They have rather concentrated upon demonstrating the application of psychiatry to individual problems and have developed the educational side of their work through contacts with the referring agencies, teachers, and parents in the individual cases examined and through informal discussions of general problems with the committee members and others who manifest special interest in the clinic's work. In three communities visited, classes in child study for parents and teachers conducted by parent-education workers from the state teachers' college helped to prepare the way for the clinic and nicely supplemented its diagnostic service.

One of the chief problems that has confronted the clinic and that has not been entirely solved has been the best method of selecting cases. In each clinic, the number of requests for examinations has far exceeded the number that

could possibly be accepted, and a rough apportionment of cases between the various towns of the county and the various schools in each town is made out in advance. Reference blanks are given out to the schools before the arrival of the clinic staff and a full explanation is given the principals as to the type of service that the clinic is prepared to offer, but no attempt is made to influence their selection of cases except by pointing out the variety of problems that are suitable for reference to the clinic. The teachers are asked to secure the consent of the child's parents for the examination and to hand in a complete statement of the problem and their reason for requesting the study. Cases referred from other sources are accepted during the clinic's visit, with written statements by the referring agency as to the nature of the problem.

The examinations of the school cases are conducted at the schools as far as possible; other cases are seen by appointment at clinic headquarters. In the school cases the social worker usually first interviews the teacher and then visits the home and neighborhood to secure a full social-psychiatric history. The psychologist begins his study with a Stanford-Binet test, which he supplements with performance material, educational tests, and tests for special abilities and disabilities. The psychiatrist examines the child from the physical and psychiatric standpoint. All of these findings are discussed by the staff and an analysis of the problem and recommendations are worked out by them jointly. In certain cases, further examinations are arranged for in the field by members of the research unit of the hospital, or the patient may be sent to Iowa City for a complete hospital study. The psychiatrist prepares a written report on each case for the referring agency and confers with parents and teachers in regard to the recommendations in special problems. The assistance of the local social workers is often obtained in preparing the histories in the cases they refer, and some strictly medical consultations are given by the psychiatrist to other physicians.

The clinic has adhered to the hospital's policy of intensive study of the individual case from as many angles as possible and has not attempted any surveys or group studies for sta-

tistical purposes. The staff has remained from five to ten weeks in each county visited and has been able to examine about twenty cases a week. A period of six weeks in the field, followed by two weeks at the hospital to write reports, has proved a satisfactory distribution of time, with one month during the summer at headquarters for work with the research unit on methods of examination and retraining, and one month for vacations.

Up to the beginning of the present clinic, 1,106 cases had been examined by the mobile unit, including those seen during the initial experiment in Greene County. Of these, approximately one-third were girls or women and two-thirds were boys or men. In age, they ranged from one and a half to seventy-six years, but almost 95 per cent were of school age—i.e., between five and eighteen years. The sources from which these cases were referred were as follows: schools, 707; state orphanages, 198; relatives, 74; social agencies, 57; doctors, 26; courts, 10; school nurse, 6; self, 11; at the clinic's request, 17. Excluding the institutional cases, over three-fourths of the cases referred were received directly from the schools. The problems for which the school cases were referred fell chiefly into five groups, namely: poor school work in all subjects, poor school work in one particular subject, undesirable behavior, undesirable personality traits, and very superior ability. Relatives referring cases came with requests for advice in medical, behavior, and child-guidance problems. The courts were interested in questions of responsibility and in recommendations as to the best disposition of their cases from the psychiatric point of view. The social agencies referred problems of mental disease, mental defect, antisocial behavior, unemployment, vocational guidance, child training, and the like. In the clinic's examinations, however, social, educational, intellectual, physical, and psychiatric problems were found indiscriminately in all groups with little reference to the source from which the cases came, and the primary factor in the situation appeared to lie sometimes in one and sometimes in another of the fields studied.

The environmental conditions in most of the cases from the small towns and rural districts were found to be quite satisfactory. By far the great majority of the children were of

white American stock, were living with their own parents in comfortable homes, and had several brothers and sisters. Organized recreational facilities were sometimes lacking, but this seemed to be more than compensated for by the comparative freedom from vicious neighborhood influences and the opportunities for constructive activities that the rural home often affords. The schools of the small towns and the consolidated districts were of the standard American type, and although they afforded little in the way of special classes for the exceptional child, the teachers were found to be personally interested in the problems of their pupils and usually were very willing to arrange to give extra time and individual help to the cases in which this was indicated. In some communities, school superintendents were encountered who were in the closest touch with the problems of both their pupils and their teachers, and the smaller school systems often readily made adjustments of curriculum or transfers from one school to another that would have been difficult to bring about in the larger cities. All of the communities visited had school nurses, and in all but one there was an organized social-service league with a trained secretary. Excellent coöperation was received from these workers in the preliminary community organization, but their own case loads were so heavy that they seldom could undertake to carry out intensive social treatment in any of the clinic cases except those already known to them. Medical resources were not lacking except for some patients who needed free hospital or dispensary service and this could generally be met by the state's provision for such care at the University Hospital at Iowa City. In several communities physicians who had had no special training in psychiatry, but possessed excellent insight into mental-hygiene problems volunteered their assistance to the clinic. The pediatricians were especially interested in its work.

The problems of adjustment in which the environmental factors appeared significant did not seem to arise from conditions peculiar to a small community, but resulted from situations that might be paralleled in cases encountered in child-guidance clinics in any part of the country. Sometimes the difficulty was clearly of an economic nature, in which an or-

ganization of family or community resources was needed in order to solve the school problem. One seventh-grade boy of fourteen, for example, who was referred for advice as to whether he should continue in school, was found to be entirely dependent upon an aged grandmother who was sorely worried because she would soon be unable to do the washings by which she supported the family. The lad proved to have very superior intelligence, a good physique, and an acceptable personality and had definite ambitions for a college education. His situation was called to the attention of the Committee on Underprivileged Children of the local Kiwanis Club, and they readily undertook to sponsor and supervise him until his education should be completed.

More difficult situations to adjust were those in which the behavior of the child was the reflection of poor standards in the home and improper training. One school was at a complete loss to cope with the persistent stealing of a little girl who came from a family who were engaged in bootlegging and who openly encouraged their children to bring home the neighbors' chickens or anything else they could forage. There is no social worker in this town, and after a year's further trial in the school, the principal reports that she feels that the only course now for the child is institutional training. Other instances of undesirable conduct or attitudes in school were found to be intimately bound up with conflicts in the child's emotional life arising in his home situation. One little first-grade boy, for example, had suddenly lost all interest in school, seemed to have forgotten what he had previously learned, and appeared disoriented and confused. A home visit disclosed the fact that he had been living contentedly for several years with his grandparents and that the onset of his peculiar behavior was coincident with a visit from his mother, who had previously deserted the child and now threatened to take him away with her. Oversolicitous and overexacting parents, so often found in the background of the complaining and the "nervous" child, have appeared in a number of the clinic pictures. Many thoughtful parents with excellent common sense have also been encountered who have been eager for suggestions for the better training of their children, and a considerable group of pre-school chil-

dren have been referred by intelligent parents interested in the preventive aspects of mental hygiene.

The uncovering and interpretation of the environmental or social factors by the psychiatric social worker have proved to play an invaluable part in all the case studies, especially in school problems. This angle is usually a new one to the teacher, and the social findings may throw considerable light upon the educational problem. The clinic staff is also usually in a better position than the school to work out a plan for social treatment and to present the matter to the parents from the point of view of impartial specialists. The communities visited have testified that with the clinic working as an intermediary between the schools and the homes, a better understanding and a more cordial relationship between the two have generally been brought about which has persisted after the clinic's departure.

The clinic's psychological approach to the analysis of educational problems has centered in the study of the child's school performance in relation to his native capacity and his individual experience, and an attempt has been made not only to obtain a quantitative estimate of intellectual and educational development, but also to determine individual differences on a qualitative basis. It has been found necessary to know a great deal about the individual school system before deciding upon such questions as the degree of educational retardation of a given child or the best grade placement for him, and any available records of group intelligence or educational tests previously given by the school have been useful in determining the norms for that school. Good systems of child accounting have proved of value to the clinic. It has likewise been necessary to ascertain in detail the methods of teaching certain subjects, as an apparent educational disability presented by a child may prove to be the result of a particular method that does not make use of his most facile paths of learning. The personality of the teachers and the composition of the class itself are also important factors.

The educational problems of the children who were found to have defective or subnormal intelligence included questions of exclusion from school and institutional care, placement in an ungraded room, repetition of a grade, promotion

to a group where adequate social and physical development might be secured, occupational training with lessened emphasis on accomplishment in the academic work, and discontinuance of school and vocational placement. The school problems of the children with a superior mental endowment were often problems of proper grade placement, enriched curriculum, and vocational guidance. In both groups, social, physical, and personality problems were frequently encountered and individual cases called for special recommendations. In the purer cases of intellectual deviations, the reports to the school consisted chiefly of an estimate of the child's capacity, with rather general recommendations as to his special needs, the working out of which was left to the school authorities. For the most part, there seems to have been a conscientious attempt on the part of the schools to carry out these recommendations and many adjustments have been made. The schools report, moreover, that these cases represent types that occur frequently and that a complete individual study by the clinic of one case helps them with others. Indeed, several of the superintendents have introduced rather widespread changes in their school systems after studying certain problems brought out in relief in the clinic cases and have arranged for kindergartens, have introduced standardized group tests, have sectioned classes according to ability, have changed the availability of certain subjects in the curriculum, have encouraged the teachers to continue individual studies of other problem cases along the lines suggested by the clinic, and have even made changes in personnel.

As with the factors brought out by the social and psychological investigations of the clinic, its medical findings have likewise proved of primary importance in a number of cases. Several children referred as "nervous" have been discovered to be suffering from an acute chorea for which medical care and rest in bed were indicated. Adenoids and enlarged tonsils have been found associated with defective speech in some cases and with poor general physical development in others. A number of cases of malnutrition have been called to the attention of the school nurses for advice as to the giving of extra milk in school and help in establishing better dietary habits at home. The clinic itself has not attempted exten-

sive physical examinations in every case, but has as far as possible made use of the findings of the family physician for this part of the study, referring to specialists any significant deviations. Where indicated, however, complete neurological examinations have been made and several cases with symptoms of definite organic lesions have been found, such as cases of spastic paralysis with its limitation of the child's motor and speech output which may have obscured estimates of his mental capacity and make special training necessary for him.

The psychiatric study of the case is of course the chief offering of the clinic service and covers not only a mental examination, to determine evidences of any true mental or nervous disease or mental defect, but also an evaluation of the emotional responses, the personality, and the general behavior of the individual in terms of his constitutional make-up, his own life experiences, and the standards of the community. The psychiatrist's diagnosis consists usually of an analysis of the patient's characteristic mental and emotional reactions and an explanation of his behavior from the point of view of his mental mechanisms rather than a formal psychiatric classification. Among the adults examined, diagnoses of paresis, cerebral arteriosclerosis, senile dementia, toxic exhaustive psychosis, chronic alcoholism, manic-depressive psychosis, dementia praecox, feeble-mindedness, psychoneurosis, psychopathic personality, epilepsy, and the like have been made. Among the school children, cases with epilepsy, congenital syphilis, post-encephalitic syndromes, and neurological disease have been seen, and in a few instances an early dementia praecox has been suspected. The proportion of feeble-minded among all the cases examined in community clinics has been about 12 per cent. Milder psychiatric deviations, such as inadequate compensations or over-compensations for special disabilities, paranoid trends, emotional instability, infantile reactions, and psychoneurotic episodes, have been encountered many times among the school children, and the problems of those with special disabilities in learning have proved of absorbing interest.

It was during the first experimental clinic held by the hospital in Greene County, Iowa, in 1925, that the problems of children with special difficulty in learning to read came to

the attention of the director, Dr. Samuel T. Orton, and it was his personal study of an outstanding case from that series¹ that suggested the research in cerebral physiology in which the Psychopathic Hospital has been engaged for the past year and a half, with assistance from the Rockefeller Foundation. Further investigation into the nature of the reading disabilities has been undertaken as part of this program and has been carried forward on a broad basis by both the field and the research unit of the hospital. Members of the research staff have been working on certain fundamental problems in brain anatomy, neuropathology, and cerebral physiology in the hospital laboratories, and the investigation has included psychological and educational studies of a number of children with this difficulty.

The reading performance of over 300 school children has been analyzed, and a protocol of tests for the diagnosis of specific disability in reading has been devised and standardized and suggestions for retraining outlined by the psychological assistant, Miss Marion Monroe. Last summer a school was organized at the hospital for the experimental retraining of a group of children of average and superior intelligence who were a year or more retarded in reading, and careful studies were made of their physical, motor, social, educational, and personality development and of the methods that were most successful in their retraining. The field unit, in the meantime, has been alert to the possibilities of the occurrence of reading problems in cases referred to the mobile clinics for any reason and has given special reading examinations, under the direction of the research unit, in one-fifth of all the school cases seen in the last five clinics. Specific reading problems, as estimated from consideration of the child's reading ability in comparison with his grade placement, his mental age, his ability in arithmetic, and his most characteristic errors in reading, have been found in approximately 25 per cent of the cases referred to the clinic from the first seven grades of the schools of five typical districts.

† The clinic studies of these cases have brought to light many striking psychiatric problems apparently directly resultant from the disability, such as pronounced feelings of inferiority,

¹ "Word-Blindness in School Children", by Samuel T. Orton, M.D. *Archives of Neurology and Psychiatry*, Vol. 14, pp. 581-615, November, 1925.

emotional blocking, antagonism to the teacher, dislike of school, and unsuccessful attempts at compensation. The teacher's unsympathetic attitude toward a pupil whom she thought was very stupid or very lazy because he could not learn to read has often changed markedly when the nature of his difficulty has been explained, and the primary supervisor in one school system became so interested in the problems of these children that she offered to arrange for special individual help along the lines suggested by the clinic for every child for whom it was recommended. This project has now been carried on throughout a semester under direction from the hospital and the results have been exceedingly gratifying.

The research unit has further supplemented the work of the field unit by giving special examinations in cases of speech defects and by outlining to the child's teachers and parents specific methods for their correction. The hospital itself has contributed to the success of the field work by furnishing headquarters and by providing more intensive psychiatric and laboratory examinations in special cases referred to it from the clinic and the various phases of the work have been coordinated by the director. During the remaining six months of the experimental-clinic program, it is planned to hold short follow-up clinics in each of the communities visited in order to determine more fully the success of the methods of organization and of examination that were employed, the extent to which the clinic's recommendations have been followed, and the value of the project to the individuals studied and to each community as a whole.

From our experience in Iowa, we are prepared to say that the mobile clinic has excellent possibilities as a method of meeting the needs of the rural districts and smaller communities of a state for psychiatric clinics, and that the type of organization that has been built up for this experiment—a full-time unit with psychiatrist, psychologist, psychiatric social workers, and secretary, working under the direction of a psychopathic hospital and carrying into the field its research point of view and its emphasis upon thorough studies of a limited number of cases rather than the superficial examination of many—offers much that would be of value in any permanent traveling-clinic service established on a state-wide basis.

AN INVESTIGATION OF THE EFFECT OF GLANDULAR THERAPY ON THE INTELLIGENCE QUOTIENT *

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THE concept of the relation of glandular dysfunction to intelligence is not entirely a new one, but very little appears in the literature that is definite and the result of research on this subject. Several empirical studies mention, but apparently do not follow up with definite data, their conclusions as to the relation of intelligence and glandular functions. General statements abound in the literature, such as, "The loss of thyroid secretion leads to idiocy, to simple, mindless vegetation." Weil¹ does not hesitate to say that the higher mental activities depend on the endocrine glands. These statements may be very true, but definite data in proof of them do not accompany the statements. Potter, in his research work at Letchworth Village, has given us perhaps the only real scientific data that are at hand on the reëxamination of patients after glandular therapy: He states that endocrine imbalance has a definite causal relation to the mental defect of certain cases, but whether the inferiority is due to a general inherent tissue inferiority or whether in some cases it has a direct causative relation to the mental deficiency is unknown.

Mental backwardness and lack of intelligence are vague terms and cover a multitude of unknown conditions. Except in the case of cretins and Mongols, but few generalizations are possible. As yet no statements can be found regarding the successful treatment of Mongols with thyroid. The treatment of Mongols with pineal-gland extraction makes them more difficult to handle, according to a rather empirical study. Defi-

* The writer wishes to acknowledge her debt to Dr. Sylvester R. Leahy, psychiatrist of Catholic Charities, New York City, at whose suggestion this piece of work was undertaken and who contributed many valuable comments.

¹ *The Internal Secretions*, by Arthur Weil, M.D. Authorized translation by Jacob Gutman. New York: The Macmillan Company, 1934.

nite data on this are not available at present. Wile claims that in the past few years very beneficent large-scale results have been obtained in the amelioration and prevention of cretinism by means of simple iodine feeding, but fails to follow up this statement with definite data. Wile¹ recently stated that the prognosis for a cretin with an I.Q. of 83 is better than for one with an I.Q. of 45, but does not go on to state definitely just what improvement in I.Q., if any, these cases showed after the feeding of thyroid substance.

It is assumed that the internal secretions are closely linked up in their functions with one another and that certain glands either promote or retard the action of others, thus presenting a mutual relationship. For this reason it is difficult to assign to any one particular gland the function *in toto* of supplying the something that means eventually intelligence or high I.Q. The apparently simplest cases of glandular dysfunction become very complicated as our study into the particular case reveals malfunction of multiple glands and not merely of some one specific gland.

Probably no subject in the range of physiology has attracted more attention than the function of the thyroid gland. According to Berkeley,² the size of this gland often gives no indication of its function and an enlargement of the thyroid gland may be an indication of under- rather than over-function. Timme³ makes mention that under-activity of the thyroid produces individuals who are mentally dull and sluggish, who have little initiative, move and think slowly, are forgetful, and show lethargy disturbed by outbursts of anger. The only explanation given for the accompaniment of this mental inertia in thyroid-deficiency cases is cited by Crile.⁴ The function of the thyroid gland, he states, "is that of a controller

¹ "Some Prognostic Values in the Measurement of Intelligence", by Ira S. Wile, M.D. *New York State Journal of Medicine*, Vol. 27, pp. 776-80, July 15, 1927.

² "Therapeutic Uses of the Thyroid Gland", by William Nathaniel Berkeley, M.D. *American Medicine*, New Series, Vol. 18, pp. 790-94, November, 1923.

³ *Lectures on Endocrinology*, by Walter Timme, M.D. New York: P. B. Hoeber, 1924.

⁴ *The Thyroid Gland*, by George W. Crile, M.D., and his associates at the Cleveland Clinic. Edited by Amy F. Rowland. Philadelphia: W. B. Saunders Company, 1922.

of the electric conductivity of the brain; hence a controller of its sensitivity and of its activity; hence a controller of basal metabolism''.

In a study made by Naccarati¹ in 1922, we find an attempt to establish a correlation between intelligence and the hormones that promote the morphogenesis of the skeleton and the muscles of the limbs. He works under the assumption that these same hormones promote also the development of the psychomotor and psycho-sensory centers. The hormone favoring this particular development is known as a catabolic or accelerator hormone. It is, namely, the thyroid, with some adrenin, sex, and post-pituitary. An excess of this hormone results in the condition known as hyperthyroidism, and this in the microsplanchnic individual—that is, an individual with an excessive development of the limbs and a relatively deficient development of the trunk—is the condition Naccarati is referring to. In this type of individual he found a slight positive correlation of about 2.8 to 3.0 between intelligence and either the morphologic index or the ratio of height to weight.

There is practically nothing definite in the literature as to the intelligence accompaniment of any of the glands other than the thyroid. According to Hoffstaetter² the removal of pineal inhibition increases sexual precocity and intellectual powers. On the other hand, we find endeavors being made to improve the intelligence of backward children by feeding them pineal-gland preparations.

Berkeley, in connection with Professor C. L. Dana, in 1914 made a study of the results of treating mentally retarded children with pineal gland.³ Fifty children under the supervision of Dr. Goddard and Dr. Cornell at the Training School at Vineland, New Jersey, contributed to this study. The results seemed to be rather impressive at that time. "Some advanced only slightly"; in others the treatment "worked

¹ "Hormones and Intelligence", by Sante Naccarati, M.D., and E. L. Lewy-Guinzburg. *Journal of Applied Psychology*, Vol. 6, pp. 221-34, September, 1922.

² Quoted by Weil in *The Internal Secretions*. See reference note 1, page 90.

³ See "The Use of Pineal Gland in the Treatment of Certain Classes of Defective Children", by William Nathaniel Berkeley, M.D. *The Medical Record*, Vol. 85, pp. 513-15, March 21, 1914.

wonders". In 1924 we find Berkeley¹ stating that hypopinealism is not so very common among backward children and that in a great many cases of mental deficiency, treatment of this gland must be combined with additional glandular treatment. "Hypo-pinealism", he states, "is to be expected in children where there is a small body and retarded mental development." It appears from a number of different sources that endocrine disorders are of the pluriglandular type when present in the feeble-minded and cannot be readily attributed to any one particular gland dysfunction.

Potter² states that the glandular treatment tried on 314 cases at Letchworth Village was without very striking results. It was found, he states, that endocrine treatment does produce certain changes for the better in deranged physical conditions by reducing certain types of obesity and stimulating physical growth, and in a certain number of cases seems to be a factor in speeding up or stimulating a sluggish intelligence.

Although the study of the glands of internal secretion has been occupying the medical profession for the past twenty years and much has been learned of these glands histologically and functionally, endocrinology is still conceded to be in a very experimental stage. It is admitted that there are very definite conditions that are benefited by the giving of these glands and there is great hope that improvement in physical and emotional condition may be accompanied by improvement in intellectual status. Berkeley states³ that the subject improves under glandular therapy, but he "never gets well". The depressed, nervous irritability present in some cases before menstruation often disappears with the administration of ovarian extract plus small doses of thyroid. It is a well-recognized fact that there are patients who suffer from epileptiform manifestations that seem to bear a definite relation to the menstruation period and in whom the administration of thyroid and ovarian substance brings about a

¹ "Diseases of the Pineal Gland with Incidental Comment on Its Function", by William Nathaniel Berkeley, M.D. *American Medicine*, New Series, Vol. 19, pp. 627-31, November, 1924.

² *Résumé of Research Work at Letchworth Village*, by Howard W. Potter, M.D. *MENTAL HYGIENE*, Vol. 9, pp. 772-82, October, 1925.

³ See note 2, page 91.

diminution of the attacks and in some cases apparently a cessation.¹

The following study is an attempt to present some definite material on the relation of glandular therapy to intelligence in terms of I.Q.

Of 1,867 heterogeneous cases that have attended the mental clinic at St. Vincent's Hospital since 1923, 182 cases were diagnosed by the psychiatrist as suffering from some definite endocrine dysfunction involving one or more glands, and in each case some glandular therapy was prescribed. Of these cases 112 were boys and 70 girls. The group consisted for the most part of children from three to sixteen years of age. Seventeen cases between the ages of sixteen and thirty years have been included in the study and labeled as being "over sixteen years". The chronological-age distribution is presented in Table I. Excluding the cases over sixteen years, the average chronological age was ten years, six months.

TABLE I. CHRONOLOGICAL AGE DISTRIBUTION OF 182 GLANDULAR CASES

<i>Age</i>	<i>Cases</i>
Three years.	0
Four years.	2
Five years.	5
Six years.	3
Seven years.	9
Eight years.	21
Nine years.	12
Ten years.	18
Eleven years.	16
Twelve years.	24
Thirteen years.	17
Fourteen years.	21
Fifteen years.	9
Sixteen years.	8
Over sixteen years.	17

182

Of the 182 cases studied, 101—83 boys and 18 girls—were classified as hypothyroid. They presented the physical symptoms of such a condition, excluding the metabolism test. Metabolism results in children below the age of ten years are

¹ "Epileptiform Manifestations in Endocrine Disorders", by Sylvester Leahy, M.D. *New York State Journal of Medicine*, Vol. 22, pp. 8-14, January, 1922.

stated by competent authorities to be unreliable. Most of the cases showed the features characteristic of hypothyroidism—thick and dry skin; scanty hair; obesity in certain parts, particularly the abdomen; thick, stubby hands; and general retardation in sexual development. In addition to the physical stigmata, these cases showed a general dullness and apathy of the intellect and emotions. One of these cases was definitely labeled “cretin” and several approached the cretinoid type.

There were only three hyperthyroid cases, one boy and two girls. These cases showed the physical accompaniments of rapid pulse, fine tremor, enlarged thyroid, and increase in excretory activity, along with a general nervousness.

There were 23 hypopituitary cases, 16 boys and 7 girls. The chronological-age distribution paralleled that of the group in general. These cases show a general increase in body weight and a feminine distribution of fat. Their skin is smooth and of fine texture. The sexual glands are underdeveloped.

Two cases of hyperpituitarism were found in boys, one thirteen and the other seventeen years of age. Both were overweight and oversize for their ages.

Three cases included in the study came under the heading of thyro-pituitary; that is, they showed a combination of symptoms that indicated a dysfunction of both the thyroid and the pituitary gland—for example, a scanty growth of hair, as in the cases of hypopituitarism, along with the defective physical characteristics of hypothyroidism. Of these cases two were boys and one a girl.

Under the heading “pluriglandular deficiency”, we have the cases that show a marked sexual underdevelopment. In the boys it is characterized by the failure of the larynx to develop and the retention of the childish soprano voice, along with other indications. In the girls it manifests itself in the delayed onset of menstruation or perhaps in very scanty periods. These cases are not labeled as pure dysfunction of the sex glands because there is usually an indication of the malfunction of other glands as well. Both the thyroid and the pituitary gland tend to stimulate the reproductive glands,

and with a marked failure in the reproductive glands to function, we usually find some hypothyroid and hypopituitary indications present. We have 50 such cases in our study, 8 boys and 42 girls. The average age for the boys was thirteen years and for the girls fourteen years.

Table II shows the general sex distribution of cases according to their glandular classification.

TABLE II. DISTRIBUTION OF 182 CASES ACCORDING TO SEX AND GLANDULAR GROUP

<i>Glandular group</i>	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Hypothyroid	83	18	101
Hyperthyroid	1	2	3
Hypopituitary	16	7	23
Hyperpituitary	2	0	2
Thyro-pituitary	2	1	3
Pluriglandular	8	42	50
Total	112	70	182

Of the 182 cases that came to the clinic and were found with some definite glandular dysfunction, 61, or almost one-third, came for the establishment of their mental status and 36 for social placement. Under both these headings, we find relatively the same proportions of the various glandular disturbances. Under the classification "nervousness", we find mostly hypothyroid and pluriglandular cases; there were 23 of these in all. Twenty-seven cases of "retardation" show a similar distribution. In the "delinquency and truancy" group, we have 15 cases, 12 of which were hypothyroid boys and one a hypothyroid girl. Our eight cases of "misconduct and incorrigibility" were scattered—three hypothyroid, two pluriglandular, and three hypopituitary. The three sex-problem cases show a similar distribution. We have two cases of "incompetency", one of chorea, and one of deafness coming under pluriglandular disturbances, and two cases of speech defect, both of which were hypothyroid boys. Our two cases of enuresis were both boys, one hypothyroid and one thyro-pituitary. A lone case coming for vocational guidance, a boy, was found to be a hypopituitary.

The only particularly significant fact in this data is that—practically all of our glandular cases that came under the classification of "delinquency and truancy" were hypothyroid cases.

In the general procedure of clinical examination, the intelligence quotient was established by means of the Terman revision of the Binet-Simon intelligence test for these glandular cases. The minimum I.Q. of the group was 30 and the maximum 115; the average I.Q. was 74. A distribution of the intelligence quotients of this glandular group has been superimposed on the distribution of the intelligence quotients for the 1,867 cases of the clinic in general. The lower limit for the whole clinic group was 23 and the upper limit 147, with an average I.Q. of 78. The average I.Q. of the glandular cases was, therefore, somewhat lower than that of the clinic cases in general. But the glandular group presents the same general type of curve for I.Q. distribution as the whole clinic group, with perhaps a slight skew toward the minus end of the curve.

A distribution of intelligence quotients according to type of glandular dysfunction may perhaps give us some indication of the part each glandular function plays in making up the general curve of distribution for intelligence. This distribution has been made in Table III. It is indeed unfortunate that our numbers in some of the groups are so limited.

TABLE III. DISTRIBUTION OF 182 CASES ACCORDING TO GLANDULAR GROUP AND I.Q. RATING

Glandular group	Total	Intelligence quotient									110 and over
		30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	over	
Hypothyroid.	101	2	5	7	15	31	25	12	2	2	
Hyperthyroid.	3	0	0	1	0	0	0	2	0	0	
Hypopituitary.	23	1	2	2	5	4	2	5	1	1	
Hyperpituitary.	2	0	0	1	1	0	0	0	0	0	
Thyro-pituitary.	3	0	0	0	0	2	0	1	0	0	
Pluriglandular.	50	1	1	10	13	0	8	4	3	0	
Total.	182	4	8	21	34	47	35	24	6	3	

The minimum, maximum, and average I.Q.'s for the various groups were as follows:

	Minimum	Maximum	Average
Hypothyroid.	33	115	75
Hyperthyroid.	59	94	81
Hypopituitary.	30	110	74
Hyperpituitary.	52	61	57
Thyro-pituitary.	71	90	77
Pluriglandular.	30	108	71

So far as this particular study goes, no definite correlation seems to exist between the various glandular dysfunctions and intelligence. From the table here presented it does appear that the hyperthyroid cases are apparently the most intelligent of the group, while the hyperpituitary cases make definitely the poorest intelligence showing. The latter group is so small, however, that no conclusions of any significance can be drawn from it.

A detailed study was made of those cases in which we were able to secure a second or third psychological rating after treatment had been instituted. It is unfortunate that these cases are limited in number to 22, but even with so small a group it is hoped that the information here presented may prove valuable because of its definiteness. Of the 22 cases, 12 were in the thyroid group, 7 in the pluriglandular, and 3 in the hypopituitary. Ten of the 22 cases actually lost I.Q. points on the reëxamination, while the remaining 12 showed a gain. The findings for the various groups were as follows:

	Total group	Thyroid group	Pluriglandular group	Hypopituitary group
Number of cases.....	22	12	7	3
Points lost.	43	22	12	9
Points gained.	77	34	40	3
Net group gain or loss *.....	+34	+12	+28	-6
Average individual gain or loss.....	+ 1.5	+1	+4	-2

* The plus sign indicates a gain, the minus sign a loss.

For the entire group there was a loss of 43 points against a 77-point gain. Each individual may therefore be accredited with a gain of 1.5 points. This is surely not indicative of anything special, since some gain should be allowed for in view of the lowering of the emotional factor that is to be expected on reëxaminations; the effect of practice must also be taken into consideration. The greatest gain for any individual was 11 points and the greatest loss 10 points, the former occurring in the pluriglandular group, the latter in the thyroid. The greatest gain for any individual in the thyroid group was 8, and in the hypopituitary 3, while the maximum losses in the pluriglandular and hypopituitary groups were 4 and 6 respectively.

To sum up the results of the reëxamination, of the 12 cases

that were receiving thyroid grains ranging in dosage from $\frac{1}{4}$ to 1 grain, half showed a lowering of the I.Q., the number of points lost amounting to a little more than half the number of points gained. The average gain in I.Q. in this group was 1 point for each individual receiving thyroid.

The greatest gain in I.Q. points was scored by the 7 cases treated with thyro-varium for a pluriglandular insufficiency. In this group we have an average gain of 4 points for each individual.

The 3 hypopituitary cases, which were receiving a combination of thyroid and pituitary extract, showed an average loss of 2 points.

So far as the findings on these three rather small groups go, it may be safely stated that there was no appreciable gain in I.Q. as a result of the treatment by glandular extracts. This, of course, confirms the now well-established theory that the I.Q. rating does not change perceptibly, and this seems to hold even in cases where glandular treatment has been given for periods of from four months to over two years.

The chronological ages of the reëxamination group were relatively high compared to those of the whole 182 under study. The minimum age for the reëxamination group was eight years, two months and the maximum fourteen years, ten months, with an average age of eleven years, four months. The average age of the entire study was ten years, six months. It is possible that we are dealing here with a group too mature chronologically to permit of affecting the I.Q. rating by treatment. If there is any hope of a raising of the intelligence-quotient rating, it is perhaps only in the earlier years, when the mind is more plastic than it is at the age of eleven, that this can be accomplished. In our reëxamination group, to be sure, we found the greatest amount of gain in I.Q. among the older cases, but this was probably due to the fact that the pluriglandular cases compose most of the upper-age groups. The changes in the various groups were as follows:

	<i>Cases</i>	<i>I.Q. points lost</i>	<i>I.Q. points gained</i>	<i>Net loss or gain</i>	<i>Average loss or gain</i>
8-9 years ..	6	13	16	+3	+0.5
10-11 years ..	5	16	3	-13	-0.26
12-13 years ..	7	12	40	+28	+4.00
14-15 years ..	4	2	18	+16	+4.00

A correlation of changes in rating with duration of treatment does not show that the greatest gains in I.Q. are with those who have been under glandular treatment for the longest period of time. Indeed, almost the opposite seems to be true: the greatest gain in I.Q. is scored by those whose reëxamination occurred within one year after the original I.Q. was secured.

<i>Duration of treatment</i>	<i>Cases</i>	<i>I.Q. points lost</i>	<i>I.Q. points gained</i>	<i>Net loss or gain</i>	<i>Average loss or gain</i>
6 months ...	9	9	39	+30	+3.3
1 year	4	5	19	+14	+3.5
1 year, 6 mo.	1	0	3	+ 3	+3.0
2 years	8	29	16	-13	-1.6

Several case histories are herewith presented to show how some cases have profited physically and emotionally by glandular therapy with no perceptible variation in their intelligence quotients.

Case 1.—A girl, aged thirteen years and eight months, came to the clinic in October, 1924, with her mother. The problem was retardation in school and chronic constipation, with enuresis. She had entered school at six years of age and was then in the 3A grade. She had been a full-term baby, with a slight head injury due to instruments. She was bottle fed, talked at nine months, and walked at twenty-one months. She was reported to have been a healthy child, but backward mentally. This girl was easy-going and not at all timid, good-natured until crossed, then displaying quite a temper. She was an affectionate child, very fond of her dolls. She helped her mother with the dishes. No delinquent tendencies were noted.

The physical examination showed this child to have in general a poor development for her age. She was obese and pudgy, with a prominent abdomen. She was under height for her age and extremely overweight, her height being 49 inches and her weight 79 pounds. Her hair was dry, scaly, sparse, and coarse, with some bald spots.

The psychological examination gave her a mental age of 6 years, 6 months, with an I.Q. of 47.

According to the psychiatrist, she showed a good-natured attitude, but was sluggish mentally and physically. She was classified as hypothyroid (cretin) and put on thyro-varium and thyroid grain 1 a.c.

Within one month her weight was reduced four pounds, and she seemed more active and playful. Her skin and hair seemed less dry and her hair was no longer falling out. Her enuresis had stopped and her bowels were behaving much better. Four months later her weight was down to 71 pounds and she had increased an inch in height. About this time she began to show some nervousness and the thyroid therapy was stopped for a while. Within a year of her first appearance here, she showed better general development in every way. She had grown three inches and weighed 78 pounds, one pound less than when she came to the clinic. Her hair was less dry and the bald spots had entirely disappeared,

and her skin was pink, but menstruation periods had not been established as yet.

Three years later, a psychological reëxamination gave her an intelligence quotient of only 48.

Case 2.—This case was a boy, aged eight years and two months, with no particular family background. At eighteen months of age he had convulsions, which recurred at intervals up to five years of age. They were usually nocturnal. He would become limp, jerking his arms and legs, but he did not lose consciousness. He was breast fed for fifteen months. He walked at twenty months, and talked at three years. He entered school at seven years of age and never progressed beyond the 1A grade. He was very childish, good-natured, and affectionate, a typical "mama's boy", dependent on everybody and answering questions in monosyllables. He could not dress or undress himself.

The physical examination showed the changes characteristic of pituitary deficiency. He was 52 inches in height and weighed 70 pounds—7 pounds overweight. His general development was good, but he had a prominent abdomen with poor genital development and a generally feminine distribution of fat. His skin was soft and fine, his hair fine, and his eyebrows sparse.

His first psychological examination gave him a mental age of 3 years, 10 months, and an I.Q. of 47. Ten months later his mental age was 4 years and his I.Q. 44.

During the psychiatric examination, he showed an apprehensive, tearful attitude. He was classified as hypopituitary and placed on glandular therapy—Rx-pituitary whole grain 1 a.c. and thyroid grain $\frac{1}{2}$ a.c.

Within a month he became less restless and seemed brighter and more interested in things about him. By three months he showed fewer signs of nervousness. He came regularly on an average of twice a month. His mother was very enthusiastic about his general improvement. At five months he had his glasses changed, having shown quite a degree of hyperactive astigmatism. After nine months the medicine was changed to include pineal grain 1/10. He plays with other children now, but is quite fearful of cats and dogs. He is still overweight for his height, though that has increased three inches. He was refused admittance to school by the Ungraded Department. Recommendation was made that a pup be obtained for him to enable him to overcome his fear of animals. He soon began to enjoy the dog and his fear has disappeared.

After two years of treatment his general development has improved and he is growing and looks much better. His psychological rating, however, at this time shows a decrease. His chronological age is now ten years, six months, with a mental age of 4 years, 2 months, making his I.Q. 40. His successes and failures on the various tests practically remain the same, with very slight additional success—success, at least, not commensurate with his increasing chronological age, so that there has been an actual loss in I.Q.

It seems evident that if I.Q. rating can be affected to an appreciable degree by glandular treatment, it will be necessary to demonstrate it in a much younger group than we are dealing with here, and throughout the study a larger number of cases are needed to make the findings really significant.

In Potter's¹ study of 52 cases at Letchworth Village he found that 15 cases, or 30 per cent, had increased their mental age beyond the expected point. This improvement consisted of from 4 to 19 months, as determined by the Terman scale. The aggregate net gain for these fifteen cases amounted to 126 months, or an average of 8.4 months for each patient. If these results were expressed in terms of I.Q., it is felt that they would more or less bear out the findings here. Potter's group is a lower group than the one dealt with here—the average I.Q. of his group was 51; the average I.Q. here is 74.

Although we have not been able to show that the intelligence quotient rises perceptibly with glandular therapy, it is felt that a great many of these cases have profited both physically and emotionally from the treatment. More definite data as to physical improvement are desirable.

CONCLUSIONS

1. A very positive correlation was found to exist between dysfunction and I.Q. when a glandular-dysfunctioning group, whose average I.Q. was 74, was compared with an unselected clinical group, whose average I.Q. was 78.

2. When the glandular-dysfunctioning groups were separated, the lowest correlation between dysfunction and I.Q. seemed to exist in the hyperthyroid group and the highest in the hyperpituitary group. The other groups presented a correlation similar to that of the unselected clinical group with which we were dealing. It should be repeated again, however, that many of the groups were too small to be really significant.

3. From a reëxamination for intelligence-quotient ratings, it would seem that the pluriglandular cases made the greatest appreciable gain in I.Q. after glandular therapy was administered. This gain was 4 points. It did not appear that there was any appreciable gain in I.Q. rating after glandular therapy, especially in the hypopituitary cases, in which an actual loss of 2 points occurred. The average net gain in I.Q. points when all cases were considered was 1.5 points. The average gain in points when the loss was not taken into account was 3.5 points per individual.

¹ "Endocrine Therapy in Mental Deficiency", by Howard W. Potter, M.D. *Endocrinology*, Vol. 7, pp. 25-40, January, 1923.

STATE INSTITUTION POPULATION STILL INCREASING

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THE preliminary results of the first annual census of state institutions taken by the Federal Census Bureau were made available for publication early in October, 1927. The census included state hospitals for mental disease, state institutions for the feeble-minded, and state prisons and reformatories. The report sent out by the Census Bureau gives data for each class of institutions relative to resident population on January 1, 1927, and to admissions during the calendar year of 1926.

The report concerning patients with mental disease covers 30 states; the one concerning feeble-minded and epileptics, 36 states; and the one concerning prisoners, 31 states. As comparisons are made with the results in the same states shown by the 1923 census, the trend in institution population is clearly indicated. A striking feature of the report is the marked increase in the population of all three classes of state institutions, the rate of increase far exceeding that of the general population. Either the number of social deviates is increasing or the people to a greater extent are turning to state institutions for relief. The latter explanation seems the more probable; but, whatever the reason, it is clear that the burden of mental disease, mental defect, and crime borne by the state is continually becoming heavier.

INCREASE OF PATIENTS IN HOSPITALS FOR MENTAL DISEASE

Resident patients.—The resident patients in 105 state hospitals for mental disease in the 30 states for which complete returns were received numbered 178,353 on January 1, 1927, as compared with 161,566 on January 1, 1923. The rate of patients per 100,000 of population in these states shown by the 1927 census was 226.9 and by the 1923 census 218.5. The results in the several states for the two census dates are given in Table 1, page 104.

TABLE 1. PATIENTS IN STATE HOSPITALS FOR MENTAL DISEASE, 1927 AND 1923

Division and state	Jan. 1, 1927	Jan. 1, 1923	Number per 100,000 of general population *	
			1927	1923
Total—30 states.....	178,353	161,566	226.9	218.5
New England:				
Maine.....	1,918	1,838	242.5	236.2
New Hampshire.....	1,560	1,399	343.6	312.3
Vermont.....	835	784	236.9	222.5
Rhode Island.....	1,735	1,485	248.2	229.5
Middle Atlantic:				
New York.....	43,538	39,510	383.1	365.3
Pennsylvania.....	12,118	10,545	125.3	115.7
East North Central:				
Ohio.....	13,844	12,811	208.0	209.1
Indiana.....	6,441	5,780	205.3	191.7
Illinois.....	20,317	18,764	280.2	275.9
Michigan.....	7,765	7,392	174.8	185.4
West North Central:				
Iowa.....	5,346	5,002	220.5	207.2
Missouri.....	5,706	5,242	162.8	152.2
North Dakota.....	1,400	1,269	218.3	197.0
South Dakota.....	1,317	1,207	190.0	182.3
Kansas.....	3,697	3,295	202.7	183.6
South Atlantic:				
Delaware.....	575	518	238.6	224.2
Dist. of Columbia.....	4,326	3,931	810.1	824.1
West Virginia.....	2,315	2,134	137.6	137.3
South Carolina.....	2,558	2,400	139.4	137.5
Georgia.....	4,848	3,972	153.7	132.3
Florida.....	2,585	1,950	192.9	170.9
East South Central:				
Kentucky.....	4,831	4,635	190.9	188.1
Mississippi.....	2,855	2,537	159.4	141.7
West South Central:				
Louisiana.....	3,458	3,022	179.5	163.3
Oklahoma.....	3,566	2,873	150.9	132.6
Mountain:				
Colorado.....	2,324	2,017	218.0	203.3
Arizona.....	684	554	151.3	145.0
Utah.....	781	697	150.8	145.8
Pacific:				
Oregon.....	2,019	2,406	228.4	291.6
California.....	12,098	11,507	297.1	301.5
Federal **.....	93	90

* Based on the estimated population for January 1.

** Federal "Asylum for Insane Indians," Canton, South Dakota.

It will be noted, from the comparisons in Table 1, that an increase in the number of resident patients occurred between 1923 and 1927 in every state listed in the table except Oregon, and that an increase in the rate of patients per 100,000 of population was found in all these states except Ohio, Michigan, Oregon, and California. A decline in rate also occurred in the District of Columbia.

The highest rate of resident patients per 100,000 of population in 1927 (383.1) was found in New York, and the lowest rate (125.3) in Pennsylvania. The low rate in the latter state is due in part to the fact that a considerable proportion of the patients with mental disease are cared for in county institutions which are not included in this census. The rates in the several states as a rule indicate the extent of the provision made for the care of mental patients.

First admissions.—The census of first admissions covers the year 1926 and the results are compared with those of the census of first admissions of 1922. During this period of four years the first admissions to state hospitals in the 30 states increased from 34,362 to 36,936 and the rate per 100,000 from 46.8 to 47.3. The results for the several states are shown in Table 2, page 106.

Increases in rates of first admissions are found in 16 states and decreases in rates in the District of Columbia and 13 states. The wide variations in the several states are not fully accountable. Four states and the District of Columbia in 1926 had rates above 70 per 100,000 of population and eight states had rates under 35. Such a wide divergence in rates would indicate that state hospitals are used for the care of mental patients to a much greater degree in some states than in others. The actual difference in rates of incidence of mental disease is probably much less than these figures would indicate.

It is gratifying that the general rate of increase of first admission is so low. To judge from the experience of New York during the past nine months, the rate of increase in 1927 will be accelerated.

TABLE 2. FIRST ADMISSIONS TO STATE HOSPITALS FOR MENTAL DISEASE,
1926 AND 1922

Division and state	Number of institutions		Number per 100,000 of general population *		
	1926	1922	1926	1922	
Total—30 states...	105	36,936	34,362	47.3	46.8
New England:					
Maine.....	2	371	339	47.0	43.7
New Hampshire.....	1	375	306	82.6	68.5
Vermont.....	1	160	164	45.4	46.5
Rhode Island.....	1	391	346	56.4	54.1
Middle Atlantic:					
New York.....	16	7,711	7,218	68.2	67.2
Pennsylvania.....	9	2,092	1,525	21.8	16.9
East North Central:					
Ohio.....	8	3,215	2,708	48.7	44.7
Indiana.....	6	1,231	955	39.4	31.8
Illinois.....	10	4,352	5,053	60.4	74.9
Michigan.....	5	1,313	1,236	29.9	31.5
West North Central:					
Iowa.....	5	922	939	38.1	38.9
Missouri.....	4	1,209	1,139	34.6	33.1
North Dakota.....	1	236	242	36.8	37.6
South Dakota.....	1	201	168	29.2	25.5
Kansas.....	4	677	632	37.2	35.3
South Atlantic:					
Delaware.....	1	163	96	67.9	41.9
Dist. of Columbia....	1	641	888	121.4	188.9
West Virginia.....	4	725	687	43.4	44.7
South Carolina.....	1	601	643	32.9	37.1
Georgia.....	1	954	652	30.4	21.9
Florida.....	1	1,024	688	77.8	61.9
East South Central:					
Kentucky.....	3	1,161	1,169	46.0	47.6
Mississippi.....	2	1,008	922	56.3	51.5
West South Central:					
Louisiana.....	2	592	547	30.8	29.7
Oklahoma.....	3	1,078	695	46.0	32.5
Mountain:					
Colorado.....	1	377	399	35.6	40.6
Arizona.....	1	169	209	38.0	55.9
Utah.....	1	173	183	33.7	38.7
Pacific:					
Oregon.....	2	686	709	78.2	86.8
California.....	6	3,121	2,891	72.3	77.2
Federal †.....	1	7	14

* Based on the estimated population for July 1.

† Federal "Asylum for Insane Indians," Canton, South Dakota.

CENSUS OF INSTITUTIONS FOR FEEBLEMINDED AND EPILEPTICS

Resident patients.—The complete returns received by the Census Bureau from the institutions for feeble-minded and epileptics in 36 states show that the resident patient population of these institutions had increased from 42,164 on January 1, 1923, to 52,043 on January 1, 1927. The rate per 100,000 of population had increased from 47.0 to 54.7. These rates throw no light on the relative increase of feeble-mindedness and epilepsy in the several states in the two years, but are significant in indicating the trend of the institution population of these classes. It is regrettable that the preliminary report does not report the feeble-minded and epileptics separately.

Table 3 (page 108) shows that the resident patients of these classes increased during the four-year period in each of the states listed, although the increase in several states was very slight. The rates of patients under care vary from 7.0 in Mississippi to 120.7 in Massachusetts. As a rule the rates are much higher in the northern than in the southern states.

First admissions.—The first admissions to the state institutions for feeble-minded and epileptics in 1926 in the 36 states numbered 7,203 as compared with 6,633 in 1922. The rate per 100,000 of population increased during the period from 7.4 to 7.6, too little to be significant as indicating a trend.

Notwithstanding the increase in resident patients observed above in every state listed in Table 3, Table 4 (page 109) shows in several states a marked falling off of first admissions in 1926 as compared with 1922. The reason for the decline is probably found in the crowded condition of the institutions, rather than in the scarcity of patients seeking admission. Were suitable institutions available, the rate of first admissions with mental defect would undoubtedly be much greater.

CENSUS OF PRISONS AND REFORMATORIES

Resident inmates.—Complete census returns from the state prisons and reformatories of 31 states show that the inmate resident population increased from 47,578 on January 1, 1923, to 63,828 on January 1, 1927. The rate per 100,000 of population increased from 66.6 to 84.1. This enormous increase probably reflects a more active enforcement of law and a

TABLE 3. RESIDENT PATIENTS IN STATE INSTITUTIONS FOR FEEBLEMINDED AND EPILEPTICS, 1927 AND 1923

Division and state	Jan. 1, 1927	Jan. 1, 1923	Number per 100,000 of general population *	
			1927	1923
Total—36 states.....	52,043	42,164	54.7	47.0
New England:				
Maine	669	467	84.6	60.0
New Hampshire.....	425	393	93.6	87.7
Vermont.....	234	179	66.4	50.8
Massachusetts.....	5,092	4,062	120.7	101.1
Rhode Island.....	426	377	60.9	58.3
Connecticut.....	634	555	39.1	37.5
Middle Atlantic:				
New York.....	8,682	7,239	76.4	66.9
Pennsylvania.....	3,542	3,372	36.6	37.0
East North Central:				
Ohio.....	5,335	4,229	80.2	69.0
Indiana.....	2,412	1,945	76.9	64.5
Illinois.....	3,931	2,625	54.2	38.6
Michigan.....	3,344	2,688	75.3	67.4
Wisconsin.....	1,299	1,227	44.8	44.7
West North Central:				
Minnesota.....	2,002	1,857	75.0	74.2
Iowa.....	2,283	1,964	94.2	81.4
Missouri.....	713	587	20.3	17.0
North Dakota.....	517	338	80.6	52.5
South Dakota.....	428	424	61.8	64.0
Nebraska.....	845	751	60.8	56.3
Kansas.....	1,387	1,300	76.0	72.4
South Atlantic:				
Delaware.....	104	50	43.2	21.6
Dist. of Columbia.....	41	**	7.7	**
Virginia.....	772	533	30.5	22.2
West Virginia.....	748	547	44.4	35.2
South Carolina.....	334	123	18.2	7.0
Georgia.....	71	44	2.3	1.5
Florida.....	299	140	22.3	12.3
East South Central:				
Kentucky.....	456	425	18.0	17.2
Alabama.....	287	**	11.3	**
Mississippi.....	125	72	7.0	4.0
West South Central:				
Louisiana.....	231	130	12.0	7.0
Mountain:				
Idaho.....	285	253	54.0	53.7
Colorado.....	332	255	31.1	25.7
Pacific:				
Washington.....	900	803	58.1	55.9
Oregon.....	797	675	90.2	81.8
California.....	2,061	1,535	47.1	40.2

* Based on the estimated population for January 1.

** Not in operation in 1922.

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TABLE 4. FIRST ADMISSIONS TO STATE INSTITUTIONS FOR FEEBLEMINDED AND EPILEPTICS, 1926 AND 1922

Division and state	Number of institutions			Number per 100,000 of general population *	
	1926	1926	1922	1926	1922
Total—36 states....	60	7,203	6,633	7.6	7.4
New England:					
Maine.....	1	71	104	9.0	13.4
New Hampshire.....	1	50	38	11.0	8.5
Vermont.....	1	22	55	6.2	15.6
Massachusetts.....	5	500	483	11.9	12.1
Rhode Island.....	1	72	36	10.4	5.6
Connecticut.....	1	80	39	5.0	2.7
Middle Atlantic:					
New York.....	7	1,092	1,424	9.7	13.3
Pennsylvania.....	3	348	310	3.6	3.4
East North Central:					
Ohio.....	3	957	520	14.5	8.6
Indiana.....	3	333	226	10.7	7.5
Illinois.....	2	743	423	10.3	6.3
Michigan.....	2	533	659	12.1	16.8
Wisconsin.....	2	203	236	7.0	8.7
West North Central:					
Minnesota.....	2	212	197	8.0	7.9
Iowa.....	2	179	239	7.4	9.9
Missouri.....	1	62	37	1.8	1.1
North Dakota.....	1	104	31	16.2	4.8
South Dakota.....	1	47	79	6.8	12.0
Nebraska.....	1	85	91	6.1	6.9
Kansas.....	2	186	151	10.2	8.4
South Atlantic:					
Delaware.....	1	11	24	4.6	10.5
Dist. of Columbia....	1	7	**	1.3	**
Virginia.....	1	115	75	4.6	3.1
West Virginia.....	1	153	119	9.2	7.7
South Carolina.....	1	39	23	2.1	1.3
Georgia.....	1	18	9	0.6	0.3
Florida.....	1	123	133	9.3	12.0
East South Central:					
Kentucky.....	1	29	22	1.2	0.9
Alabama.....	1	34	**	1.4	**
Mississippi.....	1	14	13	0.8	0.7
West South Central:					
Louisiana.....	1	54	99	2.8	5.4
Mountain:					
Idaho.....	1	22	58	4.2	12.5
Colorado.....	2	39	48	3.7	4.9
Pacific:					
Washington.....	1	140	165	9.1	11.6
Oregon.....	1	131	162	14.9	19.8
California.....	2	395	305	9.2	8.1

* Based on the estimated population for July 1.

** Not in operation in 1922.

greater severity of sentence rather than an increase in crime. In the absence of satisfactory data concerning crime, however, no positive conclusions can be drawn.

Table 5 (page 111) shows that in all but 7 of the 31 states listed the rate of resident prisoners had increased from 1923 to 1927. In Ohio and Kansas the rate nearly doubled. Other states with exceptionally high rates are West Virginia, Oklahoma, Wyoming, Colorado, Nevada, and California.

The social import of the present wave of severe penalties for crime cannot at present be judged. By many, it is regarded as a movement in the wrong direction; by others, it is believed to be the only way of adequately protecting society.

Admissions.—In collecting data concerning prisoners admitted to state penal institutions, it has not been found practicable to separate first admissions from readmissions. It is probable that a large majority of the admissions reported in Table 6 are not without previous record of crime. Many have served other sentences in state prison and others have been previously in jails and other minor penal institutions. The admissions represented by these statistics are the post-graduates, so to speak, of the school of crime.

Table 6 (page 112) compares the admissions to state prisons and reformatories of 1926 and 1923 in 31 states. The increase in number during that period was from 21,054 to 27,018, and in rate per 100,000 of population from 27.9 to 34.1. It is noteworthy that the rate of admissions increased in all but 5 of the 31 states.

The rates in the several states vary from 158.9 in Nevada to 7.3 in New Hampshire. The rates are influenced by many factors and cannot be considered an index of the extent of crime in the various states. It is quite possible that a high rate of admissions might be found in a state with less than the average rate of crime. Laxity in the enforcement of law, while producing a low admission rate, encourages criminals to pursue their nefarious work.

The Federal Census Bureau, by collecting and presenting these annual statistics of institution population, is rendering a valuable service to state administrators and to all engaged in ameliorative work.

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TABLE 5. PRISONERS IN STATE PRISONS AND REFORMATORIES, 1927 AND 1923

Division and state	Jan. 1, 1927	Jan. 1, 1923	Number per 100,000 of general population *	
			1927	1923
Total—31 states.....	63,828	47,578	84.1	66.6
New England:				
New Hampshire.....	133	138	29.3	30.8
Massachusetts.....	1,923	1,448	45.6	36.0
Rhode Island.....	**388	355	**55.5	54.9
Middle Atlantic:				
Pennsylvania.....	4,170	4,298	43.1	47.2
East North Central:				
Ohio.....	9,144	4,234	137.4	69.1
Illinois.....	6,368	4,416	87.8	64.9
Wisconsin.....	1,521	1,158	52.4	42.2
West North Central:				
Minnesota.....	2,371	1,634	88.8	65.3
Iowa.....	2,144	1,794	88.4	74.3
Missouri.....	3,442	2,205	98.2	64.0
North Dakota.....	309	244	48.2	37.9
South Dakota.....	494	326	71.3	49.2
Nebraska.....	998	789	71.8	59.1
Kansas.....	2,968	1,574	162.7	87.7
South Atlantic:				
Virginia.....	1,979	1,960	78.2	81.6
West Virginia.....	1,799	1,628	106.9	104.8
North Carolina.....	1,580	1,046	54.9	38.9
East South Central:				
Kentucky.....	2,248	2,079	88.8	84.4
Mississippi.....	1,564	1,620	87.3	90.5
West South Central:				
Louisiana.....	1,682	1,593	87.3	86.1
Oklahoma.....	2,681	1,799	113.5	83.1
Texas.....	3,225	3,577	60.2	72.3
Mountain:				
Montana.....	437	331	62.0	54.0
Wyoming.....	264	335	110.9	157.3
Colorado.....	1,129	1,015	105.9	102.3
Arizona.....	444	355	98.2	92.9
Utah.....	210	200	40.5	41.8
Nevada.....	231	174	298.4	224.8
Pacific:				
Washington.....	1,548	1,010	99.9	70.3
Oregon.....	572	406	64.7	49.2
California.....	5,862	3,837	134.0	100.5

* Based on the estimated population for January 1.

** Includes data for the Rhode Island State Reformatory for Women, which has been established since 1923.

TABLE 6. ADMISSIONS TO STATE PRISONS AND REFORMATORIES, 1926 AND 1923

Division and state	Number of institutions		Number per 100,000 of general population *		
	1926	1926	1923	1926	1923
Total—31 states....	58	27,018	21,054	34.1	27.9
New England:					
New Hampshire.....	1	33	35	7.3	7.8
Massachusetts.....	3	818	693	19.5	17.1
Rhode Island.....	2	** 197	57	** 28.4	8.7
Middle Atlantic:					
Pennsylvania.....	4	1,531	1,256	15.9	13.7
East North Central:					
Ohio.....	4	3,171	2,264	48.0	36.6
Illinois.....	4	1,726	1,387	24.0	20.2
Wisconsin.....	3	819	532	28.4	19.3
West North Central:					
Minnesota.....	3	822	659	31.0	26.1
Iowa.....	3	677	753	27.9	31.2
Missouri.....	1	1,609	912	46.0	26.4
North Dakota.....	1	210	136	32.8	21.2
South Dakota.....	1	296	185	43.0	27.8
Nebraska.....	3	495	378	35.7	28.2
Kansas.....	3	1,256	1,001	69.0	55.6
South Atlantic:					
Virginia.....	1	844	608	33.5	25.1
West Virginia.....	1	850	772	50.9	49.2
North Carolina.....	1	580	368	20.3	13.6
East South Central:					
Kentucky.....	2	1,365	827	54.1	33.5
Mississippi.....	1	649	478	36.2	26.7
West South Central:					
Louisiana.....	1	765	559	39.9	30.0
Oklahoma.....	2	1,683	1,711	71.9	78.1
Texas.....	1	1,979	1,503	37.2	30.1
Mountain:					
Montana.....	1	277	243	39.9	38.9
Wyoming.....	1	76	125	32.2	57.9
Colorado.....	2	806	562	76.1	56.1
Arizona.....	1	256	207	57.5	52.9
Utah.....	1	157	186	30.5	38.5
Nevada.....	1	123	75	158.9	96.9
Pacific:					
Washington.....	2	827	750	53.8	51.7
Oregon.....	1	332	262	37.9	31.5
California.....	2	1,789	1,570	41.5	40.4

* Based on the estimated population for July 1.

** Includes data for the Rhode Island State Reformatory for Women, which has been established since 1923.

THE CORNER STONE OF THE PSYCHIATRIC
INSTITUTE IS LAID IN NEW YORK

"For now we see in a mirror darkly." I Cor. 13:12.

ACROSS that glass shall pass
The alchemy
Of patient record, search, research,
and we
No longer see
Reflected
The expected
Image with its air
Of sanctity—halo a trifle indiscern-
ible, but doubtless there—
Unctuously
Anointed with self-sacrifice,
The pious eyes
Turned with reluctant virtue from
the sight
Of fertile earth. Now a new light
From a new science falls upon the
glass, we gaze
Breathless, amazed, as through the
haze
Something emerges—no holy
puppet—something titanic
And terrible; beautiful, dynamic,
Formless, forming, reforming, hold-
ing implicitly
The sublime mystery
Of all that was, and is, and shall be.

JULIA WELD HUNTINGTON

Norwich, Connecticut

THOMAS WILLIAM SALMON, M.D.

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COMPILED BY

M. THERÈSE DE BERMINGHAM

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ABSTRACTS

NEUROPSYCHIATRY IN CHINA. By J. Lincoln McCartney, M.D.
Archives of Neurology and Psychiatry, 18:87-95, July, 1927.

A statement in the *China Medical Journal* of 1889 to the effect that nervous and mental diseases are remarkably infrequent in China is unfortunately still widely accepted. It is true that neuropsychiatric cases make up only a small part of the total number of cases that come to the mission hospitals, but the same thing is true of general hospitals in any part of the world. A study of the yearly reports of these hospitals and of questionnaires sent to about 350 physicians throughout China leads to the estimate that there are at least 3,120,000 cases of nervous and mental disease in the country, and that of these at least 1,341,600, or 43 per cent, are purely psychiatric—that is, insane or psychopathic. This is undoubtedly a great underestimate.

The facilities for meeting this situation are very inadequate. There are at present no national government hospitals for the insane in China. In Peking, North China, there is a place sometimes called a hospital for the insane, but it is actually nothing more than a prison in which psychopathic persons are confined, sometimes in chains. About 1,200 miles away, in Canton, there is a municipal insane asylum in which 200 or 300 patients are "herded". Little more is being done for these unfortunates by the Christian missions. There is a Roman Catholic hospital for about twenty patients in Shanghai, and several of the Protestant mission hospitals set aside a ward for mental cases. But the only large institution devoted solely to the care of mental patients and conducted on a scientific basis is the John G. Kerr Hospital in Canton, which has a capacity for a little over 700 patients. This institution has recently closed owing to the unsettled condition of the country. Soochow has a small "insane asylum" under the charge of the Presbyterian Mission, but it has been reported on unfavorably because of its failure to provide scientific care. The Peking Union Medical College treats psychopathic cases, both Chinese and foreign, but does not provide any separate accommodations for such cases. For foreign psychopathic patients, Shanghai has a small ward for acute cases, Hongkong a government lunatic asylum, and the Hankow International Hospital one room for mental cases. But none of these places has adequate facilities for psychiatric care.

Patients with mental trouble are a most unfortunate class in China.

If they are caught making any disturbance on the street, they are arrested and thrown into prison like criminals. Most of them are kept chained up at home, with the result that few people know about them. The general attitude toward them, even in their own families, is one of fear and dislike, inspired by the belief that they are possessed by evil spirits. This is an almost universal belief among the Chinese, a belief that is not surprising in view of the fact that twenty-four of the missionary physicians questioned stated that they had seen cases that they considered were of demoniacal possession. Patients are subjected not only to rigid confinement and neglect, but in some cases to actual torture in the effort to "drive out the devil". "In one part of China the psychotic individual is taken out into the country and a large stone is placed on his chest. If this does not crush out the devil, the patient is usually allowed to starve to death with the stone on top of him."

Another belief widely held in China is that the immediate cause of a psychosis is "the presence of mucus choking up the internal organs within the chest (which may mean the heart, lungs, or even the stomach, so indefinite is the knowledge of what really exists or the location of each)". Some of the educated Chinese regard the psychosis as a "brain sickness", caused by sorrow, anxiety, fear, anger, repression, or the like. Other beliefs are that it is a heart disease, a "loss of soul", or a wind disease; or that it may be the result of heart phlegm, sputum, or fire in the system; or that the patient's ancestors have not been interred according to rule.

Outside the two or three institutions mentioned, there are no native psychiatrists in China. Exorcism is very widely practiced, even, it is reported, by some Christians. Many of the measures employed by the native doctors do indeed often cure the patient—by putting him out of his misery. "One remedy used by them is 'tung-yau', commonly known as 'wood oil'. It is administered in the form of little cakes containing the oil. Repeated doses of this oil cause violent and distressing vomiting, which occasionally proves fatal. In using this treatment the aim of the native doctor is apparently to make his patient throw off his insanity. Croton-oil cakes are also used to cause emesis and purging in order to 'get rid of the phlegm'. Hyoscyamus or henbane is one remedy sometimes used by the Chinese, which fortunately in some cases may be beneficial. This plant is indigenous to many parts of China. A tea is made from it and administered in bad cases of mania. Whether this is done without any foundation for belief in its value, or whether it has been found by experience to have a quieting effect in cases of mania, is not known. Another method of treatment is for a 'witch doctor' to say incantations over the patient. These magic words are then written on paper, which is

burned. The ashes are mixed with water and given to the patient to drink. Pills containing sulphur are sometimes given, and in cases of epilepsy a pill containing bezoar, croton bean, arsenic, and cumabar is given. If the 'soul is lost', it is gathered together by sweeping with a broom near where the patient took sick, while members of the family summon back the soul by calling the patient's name. Needling of various parts of the body also has been reported. In Manchuria, a common medicine for mental disease is an infusion of green beans and lycopodium. Beating and striking the patient with the hand is a common practice, intended either to awaken the insane mind or to drive out the devil. A hot piece of iron is sometimes used to burn the patient in spots, or a burning coal or wick is placed on the thumb nails. In some cases feces and urine are thrown on the patient, apparently to disgust him into a cure. All the methods of sorcery are of course used by the priests, and occasionally the patient is taken to a temple to sleep before an idol in the hope that he will be cured by a dream revelation."

According to the questionnaire, between 1 and 30 per cent of the general Chinese population have psychopathic tendencies, or may be considered border-line cases. One estimate was even as high as 75 per cent. It must be remembered, however, that it is difficult for the average Occident to gauge Oriental mentality, since the standards of the two races are so different, even though the underlying, primitive trends are the same in both.

Among the causes reported as the precipitating factor in the mental illness of Chinese patients were business anxiety, death of a child, death of mother, lack of attainment, disappointment in love, domestic trouble, excessive study, loss of property, political or war excitement, loneliness, sexual maladjustment, religious dominance, fear of spirits, force of circumstances, or inability to adjust to foreign environment.

Syphilis is very prevalent in China and undoubtedly plays as large a part as an etiological factor in psychopathological conditions as in Europe or America. The use of alcohol is probably not so common among the lower classes as in Europe, but a great many Chinese, especially of the middle and upper classes, habitually indulge. Opium is being widely used again, and in all likelihood is a contributory factor in many psychopathological conditions. The fact that the Chinese are almost universally infested with parasites and that great numbers of them suffer from ever-present foci of infection are also worthy of mention in this connection.

In China, as elsewhere, the third decade of life is apparently the critical one. Of the patients reported, 23 per cent were under twenty years of age, 40 per cent between twenty and thirty, 23 per cent between thirty and forty, 9 per cent between forty and fifty, and

5 per cent over fifty. According to the questionnaires, 48.9 per cent of the patients were men and 51.1 per cent women, while of the patients discharged 65.4 per cent were men and 34.6 per cent women.

As was to be expected, the percentage of insanity varies with the density of the population. The highest rates are found in the provinces that have a population of more than 250 persons per square mile and the lowest in those that have less than 100. The latter parts of the country are settled by hardy farmers, who produce a strong human stock, while the big commercial cities, in which the stresses incident to active competition are most severe, attracts all the wandering, unsettled riffraff of the country, who are least fit to withstand mental stress and strain. The coast towns get also a good deal of the human driftwood of other nations with the result that many of the mental cases in these towns are of foreign birth.

As stated earlier in the paper, it was concluded from the questionnaires that 43 per cent of the neuropsychiatric patients in China have psychoses and are in need of institutional care. The remaining 57 per cent are border-line cases which need professional guidance at least. Practically every type of mental disorder has been reported. The percentages of the various types obtained by averaging the reports were as follows: 27.7 per cent of the patients were of the manic-depressive type; 22.4 per cent were suffering from psychoses associated with organic disease or injury to the brain, the greatest number of these being epileptics; 12.1 per cent were cases of general paralysis, although this disorder is reported by some authors as uncommon in China, because of the prevalence of malaria; 11.1 per cent were cases of dementia praecox or schizophrenia, and 7.5 per cent cases of paranoia or paranoid state; 5.8 per cent were persons with some neurosis that needed institutional care; cases of the presenile, senile, and arteriosclerotic psychoses made up 5.5 per cent; 3.4 per cent were idiots or imbeciles; the toxic psychoses, including patients addicted to alcohol or opium, made up 2.2 per cent; the infection and exhaustion psychoses 1.9 per cent; and the symptomatic psychoses, including patients with pellagra, multiple sclerosis, chorea, uremia, and so forth, 0.4 per cent.

"The symptoms of Chinese patients are fundamentally the same as those of foreign patients, although the mode of exhibition is somewhat different. It has been claimed that the Chinese are able to bear, without flinching, a degree of pain from which the stoutest foreigner shrinks in terror; in actual fact, the Chinese have just as sensitive a psyche and are also subject to 'nerves'. Chinese soldiers are the class that should be able to meet pain with greatest fortitude, yet once they experience the pain, it is the rule rather than the exception for them

to shrink from it; they beg to be given an anæsthetic for even trivial operations, or flatly decline to be operated on at all.

"A Chinese coolie can stretch himself on one or two hard boards and calmly go to sleep amid the noises of a busy street. This is not proof of the absence of nerves, for if the same coolie is near a wood at night, the rustling of the wind through the branches of the trees will make him sleepless owing to his superstitious fears. A foreigner visiting a Chinese outport town for the first time finds the native watchman with his gong an unpleasant interrupter of sleep, while the old resident slumbers on undisturbed. The ability to sleep amid noises is simply a matter of habit or training. The Chinese has a stolid aspect, is deliberate in speech and movement, and fails to appreciate the value of the golden moments as they pass, but this again is not a sign of a lack of 'nerves'."

The Chinese social system, like that of every other nation, has certain features about which pathological thinking tends to gather. Polygamy and concubinage are common in China and the resultant rivalries and hates and fears often play a part in the production of mental disorders. There is, too, the domineering Chinese mother-in-law and her treatment of her daughter-in-law and female dependents. The system of child slavery also results in many pitiful cases of abuse. Children may even be sold into brothels, and some are so terrified by the treatment they receive that they become deranged.

Chinese betrothal and marriage customs may seem unemotional affairs to the Occidental, but as a matter of fact they are as likely to be fraught with anxiety and apprehension here as elsewhere. To many unstable natures the mere approach of the time for consummating the marriage relation is enough to cause a psychic upset. Many Chinese have homosexual tendencies and state that they are always troubled by the opposite sex.

China is permeated with superstition and the fear of devils plays a large part in neuropsychiatric conditions, taking the place of the so-called "religious mania" in Occidentals. The Chinaman who is suffering from a neurosis or a psychosis does not think that he has committed the unpardonable sin, but is obsessed by the fear of devils. "He sees devils; he hears them; he feels them; he is possessed by them and is tormented by them in every conceivable way."

Another feature of Chinese life whose influence is often apparent in pathological mental states is the dominant position of the father in the household. In case of the father's death, the Chinese youth is apt to feel his defenselessness and inadequacy even more strongly than the youth of another nation in similar circumstances, and often loses his psychic balance. Patients of this type frequently present just the reverse character in their delusions. They lose all their fear

of inadequacy and feel themselves capable of assuming any responsibility; they become magistrates, kings, emperors, and so forth.

The Chinese wife who has not borne a male child and is haunted by the fear that her husband will take a concubine is another potential victim of mental trouble. She may develop ideas of persecution and assert that her husband has concubines in other places. Much anxiety is also caused by the loss of children and the approach of the climacterium.

"The Chinese are a vast storehouse of psychic meanings, which accounts for them being known as 'a puzzle', and objects for solution. The trouble in the past has been that the veneer that covers Chinese personality has been accepted without seeking deeper for its primitive foundation.

"It is hard to say in a few simple words what nervousness is, but it may be defined as a want of mental balance and self-control, an inability to muster one's mental and physical resources to meet the demands of circumstances, a tendency to neuropsychosis. Measured by this standard, the Chinese are a nervous people. An example is the want of self-control in their cyclonic outbursts of passion, the abandon of their grief, the way in which crowds are easily swayed, and the hysterical condition of the whole people in times of national disaster. As to nervous and mental diseases in China, they are not uncommon; the political and social changes through which China is now passing, the impact of civilization, the incessant influx of new and disturbing ideas, and the keener and wider competition in business will make these diseases still more common in the future."

INTRODUCTION TO A STUDY OF NEUROPSYCHIATRIC PROBLEMS AMONG NEGROES. By George S. Moore, M.D. United States Veterans' Bureau Medical Bulletin, Vol. 3, pp. 887-97, September, 1927.

This author, who is clinical director of the United States Veterans' Hospital at Tuskegee, Alabama, points out certain psychological peculiarities of the American Negro that make an accurate clinical appraisal of his mental condition extremely difficult.

American Negroes, as a group, are too diverse in origin and environment to have developed a typical racial consciousness or racial standards of social conduct. The reactions that are regarded as peculiarly characteristic of them as a group are in fact the reactions of their complexes, especially of the two that predominate among them—the inferiority complex and the compensatory superiority complex. The conflict between these two antagonistic trends often results in wide variations of conduct in the same individual. Paranoid manifestations are apparently normal to many when emotionally disturbed, as well

as extreme phases of excitement and depression, almost typical of manic-depressive psychosis.

Brought into close contact with other groups to whom he is socially and economically inferior, the Negro adopts only so much of the behavior patterns of those other groups as he considers he needs, and then hastens back to his own world, where his emotions express themselves all the more violently because of the restraints to which they have been subjected.

"Witness the difference in the conduct of the average house servant when about his employer and when relaxed in the presence of his friends. By his conduct in his own element and amid surroundings ideal for self-expression, it is interesting to view the naked and natural display of his emotions, unrestrained by the contending forces that rule his life and try his soul elsewhere, and observe that the inferiority complex so gracefully worn by him in public is cast aside as one would an overcoat in hot weather, while the battle for power rages in a manner that often shames the best efforts of his demigods of Caucasian strain. The power and vehemence of this display is little less than astounding to those unaccustomed to Negro psychology and would be regarded as abnormal behavior. . . .

"While such behavior may be domineering in the churches, lodge halls, and conventions, often appearing psychotic in trend when giving vent to any previously restrained emotional display, these persons are as often obsequious, childlike, humble, and cringing in their attitude toward combative forces when such be their employers, local governing agents, or their social superiors. At the same time the constant contact with and observation of the vices and weaknesses of their assumed superiors tend to give a paranoid trend to their comparisons in which the above-mentioned superior groups suffer."

In an environment that affords opportunity for growth and self-expression, this superiority feeling of the Negro sometimes manifests itself, even in normal mental states, as a sense of self-sufficiency out of all proportion to any inherent worth in the individual. In psychoneurotics and constitutional psychopaths, it frequently reflects paranoid trends colored by dream states with a religious setting, the Negro being preponderantly religious. One of the factors in his conflict, indeed, is his inability to reconcile the ideals of the Christian faith, which he devoutly accepts, with the attitude of its followers toward him and his race.

Escaping from the atmosphere of restraint and repression in which so much of his life is spent, the Negro naturally tends to avoid all restraints and to overreact to any stimulation, whether it be alcoholic, drug, sexual, or spiritual. In the neuroses and psychoneuroses, the

sudden release of the emotions often produces patterns of behavior so strange and so different from that previously encountered by the examiner that he is likely to consider a diagnosis of psychosis, when as a matter of fact his error lies in an inadequate evaluation of the emotions.

"In this connection many hysterical episodes with paranoid trends are often mistaken for a true psychosis. Epileptics without known 'seizures', with their peculiar personalities and unsocial attitudes, are likewise arbitrarily placed in this class because their superiority complexes have a psychotic pattern; often they are thrust into jail, manhandled, and, after being thoroughly subjugated, are hospitalized. Epileptics with known 'seizures', in the period following such seizures, suffer a like fate and are regarded as deteriorated when their mental confusion and strange psychological phenomena need only a little patience and understanding."

While mental deficiency is probably common among Negroes, Dr. Moore believes that the destruction of mental efficiency is much more common. "Many are struck about the head, cuffed and beaten into submission whenever the slightest resistance is apparent. This is true, not only when unsocial attitudes are assumed by them, but is a favorite method of chastisement by some parents, even of the very young. A very casual observation of the home life of the majority of this group reveals that there is very little care of the mind during the period of adolescence. Believing that disaster will surely follow, the child is often taught that he is not supposed to do his own thinking, for the reason that parents are afraid to let their children give any expression to their own thoughts before their education in Negro simplicity is complete. This dual effort to submerge the personalities of the very young often produces a product very similar to mental deficiency. Consequently an arrested natural development is in progress during adolescence; the adults, being mentally retarded themselves, force their children to be likewise and contribute their share of failures at adjustment so commonly pointed to by observers of Negro life. Failures, themselves, because of their contacts, they unconsciously teach failure, and hence the production of a mental insufficiency without any actual mental defects is achieved. Additional factors are superstitions, quacks, voodoo doctrines, and the strange notions advanced by preachers of many and varied religious cults; so that this group, in spite of their natural handicaps, must necessarily face perplexing issues when removed from their natural environment. This may explain in a large measure why they are such poor subjects in mental tests or psychiatric examinations. . . . Many Negroes might be rated as mentally deficient when the deficiency

has been rather in the content of their environment. On the other hand, many use their intelligence to escape what they may regard with suspicion and dread."

Among the ignorant and illiterate who make up the great mass of the Negro population, superstitious beliefs of various kinds are so strong as to amount actually to compulsive ideas, often resulting in strange behavior even in those who are mentally normal in every other respect. Constitutional psychopaths often appear psychotic for the same reason. "Even in those definitely psychotic, the obsessions, delusions, illusions, and hallucinations are colored by the influence of their weird superstitious convictions, so that it is often impossible to differentiate between the pure symptoms of the psychosis and those superstitious beliefs so indelibly fixed among them."

Another characteristic of the illiterate Negro is his predilection for big words, which often give his speech somewhat the character of a word salad. Still another is his exaggerated idea of his own physical prowess, an obsession that is likely to result disastrously for him. Very common also is the "color complex"—that is, a feeling of antagonism toward other members of his race with lighter skins. This antagonism is often very pronounced in psychotic patients, sometimes leading even to homicidal attempts, so that great care must be exercised in the selection of attendants, nurses, and physicians in order to minimize the possibilities of such conflicts.

In spite of the fact that the Negro is repeatedly subjected to an emotional strain far beyond that of any other group, and is somewhat given to brooding over his troubles, his optimism, Doctor Moore feels, is relatively profound, as evidenced in that sunniness and cheerfulness even in the face of grave disaster that have earned him the reputation of being happy-go-lucky. "Suicides and attempted suicides are comparatively rare in spite of the troubled existence he lives and the harsh knocks of realities, though the number tends to increase as the traditional environment approximates the artificial neurotic atmosphere of modern civilization. His religion profoundly affects his life and is for him the salvation of emotional stability, teaching as it does that all suicides go 'straight to hell'. There is ever present in his consciousness a sublime expectancy of something better, and in the very religiously inclined a positive assurance of a place in heaven that will adequately compensate for all the 'trials and tribulations' on earth, so that death is looked upon without fear and as the ending and mending of all heartbreaks and losses.

"If an investigation of the causes of suicide in the Negro were attempted, in many cases it could be justly blamed on alcohol and drugs as an exciting cause at least. Suffice it is to say that seldom

can any of the common causes of suicide be ascribed as the actual cause in these cases, since the inhibitory force of religion is sufficiently profound to overcome even impulsive momentary tendencies in this direction. . . .

"In the migratory movement of the Negro north, he has met with different standards of life, and the pressure upon his native intelligence which has been sufficient for his needs at home often so bewilders and confuses him that his behavior appears abnormal even though his intellect is bright and comparatively high for his educational rating.

"While it is true that a large per cent of the Negro group is illiterate and, measured by Caucasian standards, has failed to make in a general sense any appreciable economic, political, or social advancement, yet it is also true that Negro youths with good environment and from good homes are taking their places in national life in a manner comparable with like elements from the most advanced grades of civilization.

"There remain quite a few Negroes of the antebellum type, who largely represent the Negro of the past. Here you find represented that type of individual who has long since given up his place in the progress of the world and is content to be relegated to the rear in everything.

"The real progress, however, of the Negro has been among that class of educated individuals who have projected themselves into the current of national life in their economic, social, and political status on a parity with the average individual of the same social class anywhere. . . .

"The Negro represents not only a question of diagnosis, but also one of adequate treatment after diagnosis. Moreover, serious consideration must be given to the simple, but highly significant fact that he has had but a relatively short period of time in which to adjust himself to a new environment for which he was neither biologically nor psychologically prepared, in which effort he has only recently had the help of educative processes which, in themselves, have sometimes been of very doubtful value. A study of him, therefore, must represent a patient search for facts without biased opinion and a proper evaluation of all factors entering into the composite character of his psychology."

PUBLIC HEALTH PROGRESS AND RACE PROGRESS—ARE THEY INCOMPATIBLE? By H. S. Jennings. Preprint from the Transactions of the Twenty-third Annual Meeting of the National Tuberculosis Association, 1927.

Dr. Jennings gives here the biologist's answer to the question he propounds in his title. To one who has spent his life studying the

innumerable devices by which organisms of all sorts protect themselves from their enemies and their unceasing efforts to find favorable conditions and avoid unfavorable ones, there is, he states, something paradoxical in the thesis sometimes advanced that public-health work and social work are tending to weaken and corrupt the race by protecting us from our enemies, the bacteria and viruses, and showing us how to avoid unfavorable and find favorable conditions. The public-health worker, the social worker are simply doing what every living thing, bird and animal, insect and plant, is doing—what man himself has been doing for a hundred million years—and that is adjusting the organism to the environment. Such adjustment is a condition of life itself. "All organisms are forced to defend themselves in all sorts of ways against other organisms that seek to destroy them—against bears and beetles as well as against bacteria. All organisms *must* protect themselves against the injurious forces of nature, against heat and cold and wind and wet, against starvation and overeating, against unfit food and drink, against bumps and bruises and broken bones, against plagues and poisons. That's what life is—a struggle for existence. If any organism ceased to struggle, ceased to select its environment, ceased to protect itself, its kind would become extinct in a generation. So it is with man, with bird, with fish, with worm, with protozoan, with plant."

Obviously the business of adjusting ourselves to our environments must go on. But the question remains whether there are limitations to be placed upon this protective struggle. "Are there certain methods of protection that organisms must not employ; methods that overshoot themselves and fall on the other side; methods that lead to degeneration and destruction, instead of to the survival and prosperity that they are trying for?"

The answer is to be found in modern work in heredity, in genetics. "That has revealed to us that there are perverted methods of promoting survival and propagation; perverted methods of deciding who is to survive and multiply, who to perish without offspring—perverted methods that may and do result in a degenerate population. Such a population has been produced by these methods. The fruit flies of Morgan's laboratory are the pattern and exemplar of the kind of population that the pessimistic eugenicist predicts for man—a population composed of the congenitally defective, the halt, the blind, the weak, the variously deformed and degenerate. Such things, then, can be done! We must sit up and take notice. What is it that underlies such results? How can they be avoided?"

"Experimental biology has shown that what underlies them is this: At its beginning the organism is a complex thing, containing a great number of separable substances—what we call the genes. By the

interaction of these thousand substances—with each other, with the cytoplasm, with materials brought in from outside, with the forces of the environment—development takes place, the individual is produced with all his later characteristics. In early stages of development, the interactions of the genes produce new chemicals—enzymes, hormones, endocrine secretions; these again react with other products till there result, in a series of successive steps, all that we find in the body—the sex hormones, the thyroid hormone, the hypophysial hormone, epinephrin, insulin, the digestive and other secretions, the blood, the tissues, the organs, the mature individual.

“But not all sets of genes are alike. Different individuals start with different sets. Some among the genes may be defective; sets containing these yield defective products. Hormones may be produced that are deficient in quality or quantity, or both; this results in further defects. If the thyroid secretion is defective, either from poor genes or poor nutrition, the individual fails to develop normally; it becomes that pitiful half-formed thing, a cretin, an idiot. If insulin is not properly formed, diabetes results. If the sex hormones are not normal, intersexuality or other discordant condition follows. These are types of the results which follow from the operation of defective genes, or from defective interaction of the genes.”

But the genes are not something mystical, unapproachable—they are organic chemicals; and chemical therapeutics has discovered “that disorders due to defective genes can be remedied, if we know the means, just as other chemical processes can be influenced”. The consequences of defective thyroid secretion, for example, can be remedied by introducing the thyroid hormone with the food, and lack of insulin by the administration of insulin. Unfortunate human beings who would otherwise have dragged out a miserable existence, a burden to themselves and to others, are thus made normal, happy, and useful members of society. The great advances that have been made in this direction have all come within the last ten years. It is impossible to say how far they will have gone in a hundred or a thousand years.

“But consider now the further results of an enormous future development of synthetic chemistry, of chemical therapeutics. Defects in genes become as open to remedy as defects in nutrition. A defective thyroid product is replaced by manufactured thyroxin; the individual is restored to normality. But his genes are not changed; they remain defective; they are transmitted to his descendants. His descendants, too, must be treated with thyroxin. The genes of another individual are defective for the secretions of the hypophysis; of another for the suprarenal secretion; of another for the reproductive hormone; of

another for insulin. Chemotherapy remedies all these defects—for these individuals. But their descendants, receiving the defective genes, must likewise come under the treatment of the chemist. In time the race thus accumulates a great stock of these defective genes. Every individual that receives them must be treated with one or more of the substitutes for the normal products of the genes. Each must carry with him an arsenal of hypodermic syringes, of vials, of capsules, of tablets. Each must remain within the radius of transportation of the synthetic chemical laboratory on which he depends. *This* is the result of remedying gene defects.

"This picture is not an attractive one. Far better is the later condition of the race in which, through lack of skill in synthetic chemistry, defective genes have been canceled as they arise, so that each individual bears within himself, in his stock of genes, an automatic factory for the necessary chemicals. That must be our aim; our slogan for future generations must be: Every man his own hormone factory!"

But the attainment of this end does not mean that synthetic chemistry must be prohibited and the unfortunates who suffer from defective genes denied relief. It is not the mere survival of the genetically defective that leads to race degeneracy; it is the passing on of the defective genes to succeeding generations. "Without propagation, survival is harmless, so far as racial deterioration is concerned. . . . The lives of persons bearing defective genes may be made as satisfactory, as complete, as the most advanced methods can make them, without the smallest harm to the race—but they must not propagate."

The other method—that of allowing these defective individuals to suffer and die unrelieved—is not only repulsive to every humane instinct, but actually ineffectual; it does not get rid of the defective genes. The study of genetics has shown that most gene defects are recessive, which means that the defective genes are present in ten times as many healthy individuals as in individuals in whom the defects are manifest. The children of these healthy individuals receive defective genes as well as the children of the defective individuals. It is evident, therefore, that any really effective action in the direction of eliminating defective genes requires that we learn in some way to distinguish the normal individuals who bear defective genes and prevent their propagation also.

"Merely to cut out the defective individuals themselves, particularly to do that only weakly, haltingly, ineffectually (allowing them time, perhaps, to propagate before death overtakes them)—as would result from withdrawal of public-health measures—that will not touch the root of the trouble.

"The *only* remedy is to stop the propagation of the bearers of defective genes. The public-health worker must take this fact seriously; a burden of responsibility is placed on him; he *must* become genetically minded, eugenically minded. If he promotes, in the congenitally defective, propagation as well as survival, his work does indeed tend toward a measure of racial degeneration. But it is the propagation, not the survival, that is the central point. So fast as we can discover individuals that bear seriously defective genes—whether themselves personally defective or not—so rapidly must those individuals be brought to cease propagation."

There will be great difficulties to be overcome, since the instincts connected with propagation are strong. But those instincts can be satisfied without the production of offspring. Thousands of individuals in every generation voluntarily abstain from propagation. And the other course—that of eliminating the defective individuals—involves even greater difficulties. Certainly a race of beings so perversely stupid that they will not prohibit the propagation of defective individuals could never be persuaded to adopt the plan of killing off these individuals by the slow and cruel method of refusing them available help.

Another even greater difficulty is the technical problem how to determine the normal bearers of defective genes. "Before that can be done, genetics must advance far beyond its present point. For no scientific advance is there greater need. Until that comes, genetics can propose no practicable plan for positive race improvement. But any single case saved from propagation is a gain. A defective gene—such a thing as produces diabetes, cretinism, feeble-mindedness—is a frightful thing; it is the embodiment, the material realization of a demon of evil; a living, self-perpetuating creature, invisible, impalpable, that blasts the human being in bud or in leaf. Such a thing must be stopped wherever it is recognized. The prevention of propagation of even one congenitally defective individual puts a period to at least one line of operation of this demon. To fail to do at least so much would be a crime."

It is probably true that public-health work, like any other measure for controlling environmental conditions, will have an effect upon succeeding generations. "There can be little doubt, from the general picture presented by genetic investigation, that diversities in the genes, in the original constitution, of different individuals, affect every characteristic, of whatever sort, without exception. There can be little doubt that, other things being equal, some genetic constitutions are more readily attacked by plague, by smallpox, by typhoid, by pneumonia, by tuberculosis, than are others. Certain constitutions

yield more readily to extremes of temperature, to exposure to the elements, to unfit food. Certain combinations of genes are more likely to come off victorious in a struggle with a wildcat, or to survive a bite from a rattlesnake. Under such emergencies, those genetic combinations which survive are obviously more desirable. And removing any of these sources of danger—cutting off plague or pneumonia or wildcats or rattlesnakes, or subjection to cold—does permit combinations of genes to survive and propagate that otherwise could not do so. Any radical change in the environment alters the incidence of selective elimination, consequently alters the characteristics of the population in later generations.

“But for all such cases the essential question is this: If the environmental agent—whether disease, weather, or wild beast—can be controlled, prevented from attacking man, are the individuals thereby saved still undesirable—unfit, in other respects, to be citizens of the world? Are their genes radically defective, inevitably yielding deficient men and woman, even though protected from environmental conditions that they are unable to resist? Or are they merely particular combinations that are fitted to one environment rather than another? No combination of genes yields human beings that flourish equally well in all environments. The victims of smallpox, yellow fever, hookworm, malaria, of sunstroke, frostbite, lions—must we believe that they are individuals with such serious genetic defects as will make them or their descendants obnoxious, degenerate members of the community, even when those plagues have been banished by hygiene and invention?”

This is a question that can be answered only by further investigation. It is clear that individuals suffering from certain conditions, such as those mentioned earlier in this paper, do bear defective genes; in such cases the only remedy is cessation of propagation. In the case of certain other of the plagues of humanity, the question is still open. Cancer and tuberculosis are perhaps in this class. It has been found that in certain strains of animals, marked susceptibility to cancer is due to a single gene defect. If such strains are discovered in man, their members should not propagate. But we must not assume that because in some cases cancer is dependent upon a serious gene defect, it is so dependent in all cases. Cancer can be induced in strains that are apparently normal, although not so readily as in strains with defective genes.

In tuberculosis we have an example of the complexity of the biological situation encountered in dealing with most of the plagues of mankind. Environmental conditions—such as under-nutrition, exposure, any condition that markedly lowers the vitality, as well as

the frequent infection with large numbers of the bacillus that may result from close association with active cases—undoubtedly play a large part in the incidence of tuberculosis. But on the other hand, there is strong evidence that heredity also plays an important rôle. Certain races are more prone to tuberculosis than others, and within a given race it seems clear that individuals with certain genes, or certain combinations of genes, are more susceptible to the disease than others. But there is no single gene or single combination of genes to which alone can be attributed the greater susceptibility to tuberculosis. Various genetic types, such as the asthenic and the so-called infantile, show a higher susceptibility, and any gene or combination of genes that seriously interferes with nutrition lays the organism open to the attack of the tubercle bacillus. But a great number of diverse genes are involved in these effects, and those genes are undoubtedly mainly recessive. The destruction of the tuberculous individual will not get rid of them, since they are present in a great number of normal individuals and may appear in their children.

A further complication is introduced by the fact that genes that tend to give a high susceptibility to tuberculosis may coexist with genes that give high vitality and efficiency in other respects. This has been demonstrated in experimental work with guinea pigs. A parallel situation is found in human beings with respect to tuberculosis and intellectual qualities.

We have, therefore, a great number of variable factors, each with its influence upon the incidence of tuberculosis. To attempt to meet this situation merely by allowing the disease to ravage unchecked would be utterly foolish and futile. It may be that in time to come certain well-defined particular genes will be identified as strongly predisposing to tuberculosis and some means will be found of identifying the carriers of such genes. In that case these carriers, whether they be tuberculous themselves or not, should cease to propagate, as this is the only way in which the genetic factors in the disease can be effectively attacked. Until that time comes, the war on the environmental factors must continue. Indeed it is probable that the genetic factors cannot be practically dealt with until the environmental factors have been largely brought under control.

In the case of many of the plagues that public-health work is combating, "there appears to be no indication whatever that the individuals preserved are undesirable, or at a disadvantage, in a world in which the attacking agent has been controlled; no indication that defective genes are playing an important rôle. . . . We cannot in man (as perhaps we can in the fruit fly) set up for each particular gene one type as the only normal one, compared to which all others

are defective. There are many types for each gene, some adapted to one method of life, some to another. There are millions of diverse combinations of these different types, some flourishing better under one set of conditions, others under another set of conditions, none of them requiring to be considered pathological."

This brings up the general biological question: "Can it be maintained that *any* protective or defensive action, *any* selective control of the environment is harmful to the race, as leading to degeneration through the cessation of selective elimination?"

Various possible dangers have been suggested. One is that control of disease may result in a greater population than the environment can comfortably support. The obvious remedy for this situation is to slow down the rate of reproduction, as most civilized communities are already doing.

Again, it is suggested that the complete success of any one method of defense may result in the failure to develop others or even in the loss of others. The oyster, for example, protected by its thick shell, fails to develop ingenuity and inventiveness, and coming in contact with an organism that has developed these qualities, is likely to go to the wall. And it is conceivable that by completely destroying certain pathogenic bacteria or developing completely effective external methods of protection against them, we might make the internal protective action of the body unnecessary and in the course of generations lose it; just as we may or might in time lose the power of resisting high and low temperature, as a result of keeping our bodies always at the optimum temperature by clothing, houses, fire.

Such a loss would be harmless so long as the attacking agent was under complete control, but if a change in conditions, such as a sudden overwhelming alteration in climate or an increase in the virulence of a bacterium, rendered ineffectual the methods of protection previously employed, the organism, having lost its internal power of resistance, might become extinct. Indeed this may be the reason for the extinction of certain organisms that have disappeared in the past.

"But in view of the fact that control of the environment is the very fabric of life, that organisms cannot live without it, that they have been practicing it assiduously for uncounted ages, and that some of them are still flourishing, it appears idle to suggest that such control must be abandoned; it appears whimsical to look for imminent degeneration or extinction through that method of action. If such were its necessary consequence, organisms must have disappeared long ago—nay, they never would have appeared. Any organism *must* admit to itself, draw to itself, seek out, those conditions that are

favorable to its physiological processes; this is the daily business of life. . . . Hygiene, medicine, the arts of public health—these are not something new in kind; these are but later terms in the long series that begins where amoeba takes in certain substances and rejects others. With the other practical arts, they result in adapting the organism more and more completely to the environment. Along this road we must indeed watch for the sporadic appearance of defective genes, and these we must cancel by the only possible method—by stopping the propagation of their bearers. But defective genes are not the characteristic result of this process; degeneration and extinction are not its normal consequence. Abandonment of environmental control, cessation of the process of adjusting ourselves to the conditions—this is unnecessary, undesirable, impossible, unthinkable."

BOOK REVIEWS

PLANT AUTOGRAPHS AND THEIR REVELATIONS. By Sir Jagadis Chunder Bose, M.A., D.Sc., LL.D., F.R.S., C.S.L., C.L.E. New York: The Macmillan Company, 1927. 240 p.

By means of a specially constructed instrument called the sleep-recorder, the author was able to apply a uniform electrical stimulation of the plant, *Mimosa*, mentioned herein. It was shown that the plant went through a daily cycle of sensibility and insensibility, which might be described as states of wakefulness and sleeping. The plant became insensitive under the influence of prolonged darkness; lowering of temperature had an even more pronounced effect in depressing the excitability. The "awareness" of the plant was at its maximum throughout the middle of the day, and this showed a striking change in the morning and in the evening. The record was begun at 5 P.M., and taken every hour of the day and night for twenty-four hours. The plant was fully awake for the first two hours. It became somewhat sleepy from the hours of 9 P.M. to 2 A.M., but was still awake at 6 A.M., after which it fell sound asleep and remained so until past 8 A.M. So that we have here an excellent precedent for the night-club habitués who retire with the rising sun.

By means of a specially devised machine called the magnetic crescograph, the author was able to trace graphically the growth of various plants, and to detect minute variations in the rate of growth. Carbonic-acid gas gave an acceleration of growth for two and one-half minutes, but under the continued action of the gas, the original acceleration was followed by a retardation of the growth.

Plants are regarded as sluggish in their perception of light, a continuous exposure of five minutes being regarded as minimally effective. A growing plant was subjected to a single flash of light from an electric spark. The plant perceived and responded to this light as shown by the upset of the balance and the resulting automatic script made by the plant. The plant also responded to ultra-violet light by slowing the rate of growth. The retarding effect of light on growth declines toward the less refrangible rays, the yellow and the red. As the infra-red region is proceeded into, the wave lengths vary from the shortest to the longest, which may be miles in length.

The crescograph showed the influence of wireless waves, recording characteristic variations in growth depending upon the intensity of the stimulus. Feeble waves produced an acceleration in the rate of

growth, and strong waves a retardation, the effect lasting a long time after the cessation of the stimulation. With waves of medium intensity, the induced retardation was followed by quick recovery. The perceptive range of the plant is inconceivably greater than ours. It not only perceives, but responds to the different rays of the vast ethereal spectrum.

The author then experimented with wounds on plants. His object was to ascertain the effect on growth, on the throbbing pulsations of the "telegraph plant", and lastly to analyze the paralyzing effect of wounds. He found that various irritations, from a rough touch to severe wounds, retarded the growth to two-thirds the normal rate.

Even tying the plant to the experimental apparatus, which necessitated rough handling, produced an inhibition in growth from which it recovered only after a period of rest. Pin pricks and knife wounds had similar effects.

The leaflets of the telegraph plant exhibited automatic action. When a small leafstalk carrying the leaflets was detached from the parent plant and the cut end of it placed in water, their pulsation was arrested by the shock of the operation. The shock effect of the wound gradually disappeared and the pulse throb revived and continued for nearly twenty-four hours. Death, however, followed after a time. Experiments have been undertaken to arrest this march of death, as it is felt that the problem is intimately connected with the proper understanding of the conditions that lie behind life, and the other condition under which the molecular cogwheels become arrested in death.

A severe wound paralyzed the motor functions of the pulvinus of *Mimosa*. When a short piece of stem bearing a leaf was cut off, the shock effect was transmitted to every part of the parent plant and all the leaves fell down and remained depressed for a considerable length of time. The parent plant recovered slowly, but after two hours its normal excitability slowly returned and later became fully restored. Under nutriment, the leaf of the detached shoot soon held itself up, and it remained vigorous for a day, after which it gradually declined and died.

The conclusion reached from this experiment shows that the plant is able to readjust itself to conditions that call for change by counter-change and casting off the decaying part.

Very interesting are the author's experiments with the movement of the sap in plants and trees. The distribution of the sap enables the plant to maintain the cellular nutrition. A question that has perplexed scientific investigators for years has been the raising of the sap to the top of the tree. It has been argued that the movement is

due to the action of physical forces or to some activity of the living tissue. It has been proved, however, that the physical theory is quite untenable. It is well known that transpiration—that is, the exhalation of water vapor—is constantly taking place from the leaves of trees and plants, and that a partial vacuum is produced in the wood vessels which run through the plant and the tree from top to bottom. The atmospheric pressure will consequently force the water up a plant or tree, but the greatest height to which water can be raised in this manner is only thirty-four feet, the height of the water barometer. The palm grows to a height often exceeding one hundred feet, but even the palm is small compared with the giant *Eucalyptus amygdalina* with its height of four hundred and fifty feet. The theory of atmospheric pressure is, therefore, inadequate, as is also that of capillarity.

The theory of osmotic pressure has been invoked to explain the phenomenon. This does occur from cell to cell, but the process is exceedingly slow, and if the tree depended on this, death would quickly ensue, as it would take over a year for the sap to reach the top of the eucalyptus tree. There must of necessity be some other agency at work.

The author has found by experiment that the propulsion of sap is due essentially to the activity of living cells, to a mechanism essentially similar to that which maintains the circulation of the blood in animals. He used a leaf as an indicator of the movement of sap, and found that drought produced a drooping of the leaf and irrigation a rapid erection of the leaf; diminution of the pumping activity by a depressant produced a fall of the leaf. These movements are too slight to be observed except by a special apparatus which magnifies them greatly. For this purpose the author used a device which he himself constructed, called the electric phytograph, a sensitive apparatus for the detection of changing rates in the ascent of sap. The leaf is attached to the recording lever, which magnifies the movement of the leaf from ten to one hundred times. The record was then taken on a smoked-glass plate. The arrest and permanent abolition of the ascent of sap in a plant treated with poison prove it to be due, he believes, to the activity of living tissue. The alternate arrest and renewal of the ascent under cold and warmth, and the characteristic increase or depression of the rate under cardiac depressants and stimulants, showed further that the mechanism for the propulsion of fluids was fundamentally similar in plant and animal. He believes that physical mechanism could not in any way have manifested these characteristic reactions.

These experiments proved that somewhere in the interior of the

plant there is an active tissue, the pulsation of which effects the propulsion of the sap just as the pulsation of the heart maintains the circulation of the blood in the animal. The author, therefore, concluded that there must be a primitive "heart" in the plant, but not so centralized or so highly differentiated as in higher animals. He calls attention to the fact that in the lower types of animal, as also in the embryo of the higher, the heart is an elongated organ which propels the contained fluid forward by peristaltic contractions. He finds that propulsion of sap in plants is due to a similar peristaltic action. He uses the term "heart" in a broad sense, but the propulsive system may be said to correspond to the heart and arteries of animals. To locate this "heart", he devised an apparatus which he called his "electric probe". The location of the "heart" is effected by the employment of this "probe" in circuit with a sensitive galvanometer. When the probe was introduced into the plant, as soon as it came into contact with the pulsating layer, electric signals were sent out which were automatically recorded in the galvanograph.

The author then asked what proof there was that these electric pulsations actually indicated heartlike throbbings in the plant. He found that the heartbeat came to a stop when the internal pressure was low, the pulsations being renewed after an increase in the internal pressure; that the heartbeat came to a stop when the heart was in a depressed or sub-tonic condition, stimulation then reviving the heart and anaesthetics, like chloroform, stimulating the heart at first, but later, on continued use, stopping the action of the heart. Under drought the pulsation came to a stop; irrigation revived it. Keeping the plant in the dark for twenty-four hours put it in a sub-tonic condition with no ascent of sap, while stimulation with an electric spark at this time revived the activity of the sap.

The author visualizes the important processes connected with the ascent of sap. The absorbing root cells are continuously stimulated by mechanical friction against the soil, giving rise to peristaltic waves of pulsation along the active propulsive layer of the inner cortex. The direction of the sap flow is determined by differential turgor from the more turgid lower part of the plant to the upper part, which is in a state of incipient drought, due to the active transpiration by the leaves. The rhythmic contraction of the active cell propels the sap not only upward, but also laterally into the young xylem, which functions as a reservoir for emergencies, water being withdrawn from it when the transpiration is most active.

The author then concerns himself with trying to establish a nervous system in plants. He shows a thorough familiarity with physiology and with the action of nervous tissue in every particular. He found

that the plant was highly excitable, and that a very feeble stimulus was sufficient to start an impulse. He did not use an ordinary knife wound as a stimulus, for the reason that plants are much more sensitive than animals, and that such a stimulus would be a violent one. He discovered that the plant *Mimosa* could be excited by an electric shock of one-tenth the intensity of that which evoked human sensation, and that the excitation was transmitted to a considerable distance. The stimulant might be construed as being conveyed to the leaf in the ascending sap, but in this case would always travel upwards in the same direction as the sap, but would not travel downward against it. Moreover, the speed of the impulse would always be the same as that of the sap movements. He applied the stimulus of a superficial scratch on one side of a stem of *Mimosa* and found that the excitation traveled simultaneously both upwards and downwards, causing the fall of leaves both above and below. On increasing the intensity of the stimulus, the excitation was found to ascend along one side of the stem, reaching the apex and then descending down the other side. Rising sap could not possibly have produced such results. The conduction of the stimulus up and down the stem could be attributed only to the presence of special conductive tissue—that is, a nervous tissue. Accurate measurements showed that the rate of transmission of the stimulus was several hundred times quicker than that of the ascent of sap and that the movement of sap had nothing whatever to do with the conduction of the stimulus, as was shown by the effect when a drop of hydrochloric acid was applied to the tip of the uppermost leaf of *Mimosa*. The stimulus traveled a considerable distance downward against the direction of the normal ascent of sap and subsequent chemical examination proved that the stimulant had not been transported, but remained localized at the point of application. The author then measured the velocity of the impulse by applying a definite intensity of electric shock on the leafstalk at a specified distance of 30 mm. from the motile pulvinus, the intensity of the stimulus being constant in successive experiments. The velocity of transmission of the stimulus was modified according to the vital condition of the plant. It was greater in summer than in winter. It was found also that a stout specimen responded slowly, while a thin specimen responded within a very short time. When part of the petiole was moderately lowered in temperature by the application of cold water, the transmission time was shown to have been prolonged, and excessive cooling by ice-cold water abolished the power of conduction. The author found also that after intense cold the paralysis of conduction persisted for over an hour, even after the return of tissue to normal temperature. It was discovered further that the lost power of con-

duction could be very quickly revived by subjecting the paralyzed portion to the action of tetanizing electric shocks.

It was next found that poison permanently abolished the conductive power. The author used potassium cyanide for this experiment, and the conductive power was abolished within five minutes. He found also that, as in the case of animal nerves, when a temporary block was produced by maintaining a constant electric current in the path of conduction, the block persisted as long as the electric current was maintained, the conducting power being restored with the stoppage of the current.

The next experiment was concerned with the localization of the conducting tissue, and the author was apparently successful in finding, by means of the electric probe already referred to, the nerve imbedded in non-nervous tissue. As the probe was thrust into the leafstalk, no electric change was produced; but at a greater depth electric disturbance was found. As the probe was thrust in still deeper, the electric indication disappeared, the probe having traversed beyond the conducting tissue and entered a region of non-conducting tissue. In this way it was possible to localize the conducting tissue within one-hundredth part of an inch. This observation showed that the conduction of excitation was confined to a definite tissue, which might therefore be termed a nerve. The author then cut a section off the leafstalk at the line of the passage of the probe, in order to find out at what points the probe picked up the messages. The epidermis had given none, and the cortex was found to be a non-conducting wrapping. The messages had been picked up when the probe entered the phloëm. As it passed through the xylem or wood, the messages ceased, but they recommenced at the next layer. The second conducting tissue thus detected was the second internal phloëm, until now unsuspected by the plant physiologist. Thus two nerve layers were localized.

In order definitely to localize the nerve disturbance in the plant, the author made use of hematoxylin and safranin, which stained the nervous tissue a deep violet and made it stand out prominently from other tissues. This test confirmed the results reached by the indication of the electric probe. The outer and inner phloëms were similarly stained, which indicated that they were two separate nerves. He found it impossible to isolate these from *Mimosa* without tearing it to pieces, but was able to isolate it from a leafstalk of the fern. The hard casing of the leafstalk was broken carefully, and on peeling it apart, the vascular nerve strands were isolated. They were soft and white in color, similar in appearance to animal nerves. He then applied the test generally used by physiologists on the nerve of the frog to the isolated nerve of the fern and found that the electric

records of the plant nerve under varied conditions were in every way similar to those of the animal nerve.

A detailed examination of the nervous tissue of the plant showed it to consist of elongated tubular cells, the transverse septa of which act as synapsyda membranes. The characteristics of the nerve of the plant were found to be very similar to those of the animal. Though the impulse can travel in both directions, there is a preferential direction in which it travels more easily and with greater speed in consequence of the synapsyda membrane. There was then a greater facility for centrifugal rather than for centripetal transmission. Facilitation was produced by previous stimulation; the path once being made, it was easy for subsequent impulses to be transmitted. It was also found that disuse caused degeneration of nervous activity, and that it became functionally more active under the influence of stimulation. The author concludes that all parts of the plant are maintained, by means of nerve connection, in a most intimate and rapid connection with one another, and that it can only be by virtue of the existence of a system of nerves that the plant constitutes a single organized whole, each part of which is affected by every influence that falls upon any other.

The outspread leaf is not merely a special structure for a fixation of carbon from the carbonic-acid gas in the air, but also a catchment basin for the stimulus of light, the excitatory effect of which is gathered into larger and larger nerve trunks for transmission into the interior of the plant.

The author of this unusual book seems to have established a definite connection between plant and animal life and to have shown that the former has many, if not all, of the characteristics of the latter. Thus we have further proof of the evidence of evolution as a constant procession from lower to higher types.

S. R. LEAHY.

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THE MEANING OF A LIBERAL EDUCATION. By Everett Dean Martin.
New York: W. W. Norton and Company, 1926. 319 p.

The Meaning of a Liberal Education should find a permanent place among classical discussions on education. It is at once an incisive and stimulating criticism of present tendencies in education and contemporary life and a constructive statement of the nature of a liberal education. And, finally, in contrast with most educational discussions put forth in recent years by members of the profession, it combines profundity of thought with a brilliant literary style.

As Mr. Martin states in his preface, the book is not concerned chiefly with the education of children. Nor does he discuss educa-

tional methods or institutions of learning as such. The book deals rather with such problems as, "What is an educated person like? How does he differ from the uneducated? Does he think differently and, if so, why?"

When the meaning of a liberal education is sought for in the character of the individual, rather than in a specific subject matter or an educational procedure, it contrasts sharply with a number of prevailing conceptions. Education, says Mr. Martin, is not designed "for children, something which a man either got or missed in his early years, something which he generally forgot in his mature years". Nor is it to be confused with propaganda. Whenever "the educator becomes a propagandist, he gives up his proper function"; and education is wrongly conceived when, like reform, it is thought of as "something which is always good for other people".

The widespread tendency to characterize as "education the game men work to convert their neighbors" receives a well-merited condemnation. Of this he says, "If you are engaged in increasing the sale of a certain soap, in putting every one on guard against the social disability of which one's best friend will not tell him, if you can frighten a multitude with the danger of pyorrhea and thus increase your profit in tooth paste—all this is called education."

True education, in common with religion, is something to which one must come "with clean hands and a pure heart or one can never know the secret power of it". Martin's definition of education is not dogmatically stated. It rather evolves out of his discussion.

It becomes clear from such chapters as *Liberal Education versus Animal Training* (by which latter term he designates education for information, memory, drill, training in logic and disputation, such as characterized scholasticism, the formalism of classical education, and modern behavioristic methods in psychology and education), *Liberal Education versus Propaganda*, *Liberal Education versus Book Learning*, *The Educational Value of Doubt*, *A Man is Known by the Dilemmas he Keeps*, *The Free Spirit*, and *Education and Morals*. From these chapters, as well as from his discussion of Plato and Aristotle, Erasmus and Montaigne, Rousseau and Huxley, Martin illustrates from every angle the thesis that education "is emancipation from herd opinion, self-mastery, capacity for self-criticism, suspended judgment, urbanity".

As he views it, then, education is not a possession, but a way of thinking and living which each one acquires or does not acquire on his own account. It is an attitude. It is intelligent action. But as intelligent action it does not mean living a purely intellectual life, as conventionally conceived, which is out of sympathy with human

concerns and the real issues of life. In the chapter *Science and Superstition—Huxley*, he writes: "In reply to the commonly expressed fear that liberal education may give us a type of mind which is skeptical and ineffective, I offer Huxley."

Nevertheless there is a sense in which Martin concedes that the educated man is not a "man of action". In the chapter *The Educational Value of Doubt*, his isolation and his differences from the herd mind are emphasized. Here Martin contends that education ends when man stops doubting. "Doubt, the willingness to admit that conjecture is subject to revision, is a spur to learning", but he grants that it tends to impede action. It does, however, preserve "social sanity". And again, in *The Fruit of the Tree of Knowledge* he states:

"In the course of our study we have cast aside numerous idols and comforting fictions. We have seen that in the process of a liberal education old dilemmas are outgrown; that the habit is formed of questioning all things; that the educated mind becomes capable of amused self-criticism, attains urbanity of spirit and tolerant skepticism of the crowd and its partisan controversies, and with civilized resignation learns that it may not possess finality in matters of truth and right, but that a man must order his life according to the wisest discrimination of value of which he is capable."

But if the educated man identifies himself less enthusiastically and more cautiously than his fellows with the burning issues of the day, this very caution enables him to promote better the sum of human happiness. "I would suggest", Martin states, "as a part of every one's education, the reading of such authors as Lucian, Epicurus, Abelard, Hobbes, Montaigne, Rabelais, Erasmus, Lessing, Voltaire, Hume, and Anatole France. There is no blood on these men's hands. They have quietly smiled in the face of bigotry and superstition. In their words there is laughter and there is light. Perhaps no one of them ever intended to be a liberator of mankind. They merely thought and spoke as free spirits, and their very presence puts sham and cant and unctiousness and coercion and mistaken zeal to shame. They have done more for freedom and truth than all the armies of crusading devotees."

But is it worth while to acquire a liberal education? The timid-hearted will surely raise this question. Is a rather coldly critical attitude, a submergence of impulse to intelligence, and a certain amount of inevitable aloofness from the mass of mankind fundamentally to be desired? To this Martin replies:

"Men have been converted to religion and have 'back-slid' or have outgrown their faith. Men have gayly marched off to war and before the conflict ended have grown sick of it. Men have given up com-

merce, finding that it does not satisfy some deep longing in their natures. Most of those who begin their education leave off before they learn what it is about. But the few who have remained to taste the fruit of knowledge as a rule become addicted to it, and never leave off, being never satisfied with what they have yet attained. If for eating this fruit they find themselves outside the paradise of childish innocence and popular belief, they do by their bearing give us the impression that the experience is worth its cost. It is only the half-educated, those who would follow wisdom and at the same time look back over their shoulders casting longing glances at comforting ignorance, unable to say farewell, who dwell upon the painfulness of knowledge. . . .

"For the encouragement of those who might wish to continue their education or assist in the education of another, I have tried to present certain historical examples of men who have attained wisdom. They are brave men and true; they do not make us ashamed of our race. It is a pleasure to try to understand such minds, and I trust that in these times when every fence is down and there are in the field of education many strange animals and much shouting and confusion, we may have been able to gain something, from turning our attention to Socrates and Plato and Aristotle and Erasmus and Montaigne and Huxley and Nietzsche and Arnold, that will help us to see the meaning of education. But we can never be sure whether we like its fruits until we taste them."

Whether or not Mr. Martin's picture of the educated man will appeal to many as an object for emulation, we are certain that few readers will regret having this book called to their attention. It is a thoughtful commentary upon present-day concerns, sparkling with humor, biting at times with its sarcasm, vibrant with controlled feeling—itself an admirable product of one who is liberally educated.

V. T. THAYER.

Ohio State University.

MENTAL HYGIENE. By Daniel Wolford La Rue. New York: The Macmillan Company, 1927. 443 p.

One lays down this book with decidedly mixed feelings. There is a genuine attempt made to cover the field of mental hygiene and to do so by way of a textbook. Naturally a textbook presentation has its limitations, and one must make allowances for the short, concise, and dogmatic treatment that those limitations prescribe. The field, however, that the author attempts to cover is a wide one. He has tried conscientiously to deal with it in its various ramifications and has therefore been forced to the consideration of many subjects

with which he is obviously not in very good rapport. The construction of the book—with each chapter preceded by an exercise and followed by another exercise, with really quite elaborate suggestions for further study by topics for special investigation and report and by references to the literature—lends itself to a very useful and well-rounded discussion of the entire subject in class. Probably the strongest part of the book is the latter portion, written about children—a subject which the author has found especially interesting and about which he has written considerably before.

In more detailed criticism, one might say that much of the terminology used does not appeal to the reviewer at all. No special advantage can be seen in the constant repetition of such terms as bio-mental, phreno-mental, corpo-mental, and intelligects, while the occasional reference, with apparent approval, to phrenology and telepathy is regrettable. The author's understanding of psychoanalysis appears to be wanting in much that is desirable, while on the other hand his understanding of the problems of cerebral localization is unfortunately very simplistic. He speaks altogether too statically about the location of the emotions in certain places, and puts his faith in rather weak vessels when he occasionally quotes from the literature. It is a little too bad that he did not have these portions of his manuscript looked over by a competent neurologist and psychiatrist. One finds the same fault with him in the reproduction of the diagram from Scripture on stuttering and lisping. Such a diagram can hardly do anything but harm to a student who is struggling to get some idea of how the brain or the mind works. It represents localization at its worst.

Unfortunately the author apparently has no real grasp of what constitutes a true psychotherapy. His chapters are full of suggestions, many of which are worth while and show considerable ingenuity, but despite the elaborate presentation of the material they do not apparently emanate from one who can be said to have really grasped the complexities of mental functionings. He expects too much from rather banal advice and methods which have been in vogue from time immemorial and which have always suggested themselves to the lay mind as methods of procedure. Of course sometimes they work, but unfortunately not very often. The method of gradually overcoming some handicapping characteristic by a process of small, but gradually increasing doses is one of those obvious methods of treatment that constitute a pitfall rather than an asset in most instances. If people got well by such methods, it would be almost too good to be true and there would be little use for psychotherapy.

One should not get the impression from what has been said that

this book is of little value. It is a very sincere effort to cover a very broad field wherein few people can find their way about without guidance in some part. It represents a wholesome tendency to develop a text in mental hygiene and really should be heartily welcomed. The method of its construction is such that the teacher who uses it may make it serve his individual purpose.

WILLIAM A. WHITE.

St. Elizabeths Hospital.

GIFTED CHILDREN, THEIR NATURE AND NURTURE. By Leta S. Hollingworth. New York: The Macmillan Company, 1926. 347 p.

There has always been a romantic aroma surrounding the infant prodigy, the *Wunder Kind*, the child genius—in fact, the Gifted Child under whatever name he has appeared in literature and in life. Few people are so hard-boiled that they will not take a moment off to read a newspaper story or a magazine article setting forth the exploits of some new discovery in this realm. To such a public, the present volume will make little appeal. The cold, hard light of reality has been turned at last upon this field of romantic speculation. Only those interested in genius from the point of view of science and statistics will care to read a volume that takes pains to smash all myths and theories founded upon special instances and replace them with case studies of modern little girls and boys who have I.Q.'s and heights and weights and family histories.

Dr. Hollingworth is well known in the psychological world as a student of "special children". She was an authority on the feeble-minded when they were in style, has studied and written about special talents and defects in children, and has been among the first to record significant facts in the lives of what she terms the "fortunate deviates".

In spite of the scientific nature of the volume, many interesting and human problems are discussed in connection with gifted children—their education, their social value, and their economic future. While there will doubtless be much for sociologists to challenge in the author's assumption that the economic rewards are by and large distributed according to the factor of intelligence, still she has made a case that merits attention.

The atmosphere of partisanship that pervades the book—the general thesis that all rewards, mental, moral, physical, and economic, go to the I.Q. over 140—bespeaks a passionate and almost naïve identification with the gifted individual which, though perhaps natural, is yet a little complacent. I personally am left with the feeling that another volume equally scientific and quite as convincing is yet to be

written setting forth the tragedies of the unfulfilled lives of highly endowed human beings—people who, with unquestioned intellectual gifts, have gone on the rocks through lack of emotional adjustments. It seems to me we must all know as many sad, neurotic Ph.D.'s yearning after the unattainable as we do happy, successful, well-established, economically stable intellectuals, whose problems have all been solved by these superior I.Q.'s. But I fall back into the error of promulgating a thesis without producing the statistics to prove its validity.

ELISABETH A. IRWIN.

Public Education Association of the City of New York.

THE PSYCHOLOGY OF MENTAL DISORDERS. By Abraham Myerson, M.D. New York: The Macmillan Company, 1927. 135 p.

This little volume is written for the lay public. Its professed purpose is to do away with some of the mystery, misunderstanding, and fear which, for the average person, still cling to disorders of the mind.

Dr. Myerson begins by discussing some general considerations of mental phenomena, and with characteristic lucidity and positiveness presents his own conception of the relation between mind and body.

"First, mind is a function of the organism only artificially to be separated from its other functions. Thus, there is no fundamental difference, in so far as the psychiatrist is concerned, between manifestations called psychological and the manifestations called physical. Second, psychiatry deals with a group of diverse conditions called *mental diseases*, and the term *insanity* represents a useless fusion of conditions not at all necessarily alike in origin or course, and is fundamentally legal rather than medical in its origin and value." (Page 6.)

"Withal, this conception of psychiatry is not to be miscalled *materialistic*; it is *organistic*. It simply asserts that amongst the manifestations of life are those manifestations we call mental, and that, broadly speaking, they rest on an organic basis, and represent an interaction between the organic environment and that organic fragment we call the individual." (Page 9.)

Few of the so-called psychogenic school of psychiatrists will think it worth while to quarrel with Dr. Myerson's theories or to dispute the ultimate unity of body and mind. However, from a practical rather than a philosophical point of view, human affairs divide themselves conveniently into physical and mental. If a man falls off a roof, the resulting situation is primarily and predominantly a physical one. If he loses his money or is crossed in love, the effect is for all practical

purposes a mental one. Common sense made this distinction long before science pondered over the problem. At the present time, the organistic viewpoint seems largely sterile, so far as it affects the understanding or modification of many common human problems of both health and disease. If the purely psychological approach shows more fruitfulness, it may be thereby pragmatically justified.

In his treatment of mental disease, Dr. Myerson follows the order found in conventional textbooks of psychiatry. In sequences are considered symptoms of mental disorder, various disease groups under the Kraepelinian classification, criminalism, feeble-mindedness, epilepsy, and the psychoneuroses. As stated, the author favors the organic in etiology, and he holds to the descriptive in his presentation. Endocrine pathology has a strong appeal, but other than in hint and hope, care is exercised to go no further than present knowledge will permit.

The modern dynamic and psychogenic points of view are referred to frequently, but for the most part with appropriate antidotal doses of criticism and skepticism so that there is small danger of converts being made.

A section is given over to the Freudian psychology and the psychoanalytic theory of the origin of the neuroses. The author's treatment is characterized by oversimplification, oversexualization, and some distortion of the facts. The reader who gains his information concerning psychoanalysis from this section will indeed be threatened with the danger of little knowledge.

The book needs to be read as a whole, for it unfortunately lacks chapter headings, index, or any clear division that would make it useful for handy reference. Neither in style nor content is this volume by any means as finished as other popular works by the same writer. What Dr. Myerson has to say about inheritance and criminology is always stimulating and convincing. The sections on these topics seem to the reviewer the best in the book.

An undesirable feature of this text for the laity is its implication that the difference between neurosis and psychosis—or, in lay terminology, nervousness and insanity—is simply one of degree. It is true that incipient psychotic states often appear disguised in psychoneurotic symptomatology, but it is also true that well-defined anxiety and obsessional neuroses are different in kind rather than in degree, and follow entirely different roads, from the major psychoses. The individual who has made an adjustment in such a neurotic manner is often as far removed from "insanity" as the normal individual. It seems unwise and unnecessary to add to the psychoneurotic's fear that he is losing his mind, by neglecting to present these facts clearly.

The author discusses therapy and prophylaxis of the neuroses in a common-sense way, with a concise statement of axiomatic truths and good advice as to philosophy of life and the mental hygiene of daily living. However, there is little included that could not have been said equally well twenty-five years ago, and there is small reflection of any gain in medical knowledge from research in psychopathology over this period, including the studies of the war neuroses.

The reviewer must plead guilty to a bias toward a psychogenic approach to the problem of mental disease, but he also is of the opinion that what Dr. Myerson has to say is always worth a hearing. The public needs information on the subjects discussed in this book, and it should fill a useful function. Those who have confidence in the author's ability may be permitted the regret that this work, which is on the whole good, should not have been much better.

MARTIN W. PECK.

Boston Psychopathic Hospital.

INTELLIGENCE AND IMMIGRATION. By Clifford Kirkpatrick. (Mental Measurement Monographs, Serial No. 2.) Baltimore: Williams and Wilkins Company, 1926. 127 p.

This very temperately toned monograph by Dr. Kirkpatrick is worth the earnest attention of every student of human mentality, irrespective of his interest in immigration, for it deals with the intelligence not only of immigrants, but of racial groups. The author shows his scientific-mindedness by the impartial way in which he cites authors on the yea and nay sides of the question of the relative intelligence of immigrant groups. His factual conclusions are:

"a. Americans are but slightly, if at all, superior to the Finns in intelligence. Both are far above the Italians, and the French Canadians, taken as a whole, rank between these two extremes.

"b. These differences are accentuated by a linguistic handicap.

"c. The research confirms the evidence cited in Chapter II, indicating that marked differences in the intelligence of immigrant groups exist even when in the same environment, and the total evidence, with certain exceptions, is unfavorable to the 'New Immigration', especially the Italians, so that the effect of immigration on American intelligence might be viewed with some concern.

"d. The demonstration of a linguistic handicap means that these important differences in intelligence are less than they appear, but it fails to disprove their existence."

The extremely contradictory results of the investigation of the various authors who have studied the intelligence of immigrants and their descendants in the schools is noteworthy, and ought to keep any

one from a dogmatic attitude on the matter. Yet the superiority of some immigrant groups over others in intelligence tests, whether those tests be individually administered or used *en masse*, and the superiority of native Americans over recent or second generation immigrants by these tests, may be conceded, although Kirkpatrick's work shows that only in the case of the Italians is an inferiority of decisive moment to be found. What then remains is the question of the validity of the tests themselves as measures of the essential worth of the individuals tested, and, furthermore, the question whether there may not be other reasons for superiority in the tests than the assumed innate and supposedly hereditary intelligence of the superior groups.

As to the first question, it is incontestable that the tests do not measure courage, frugality, mechanical skill, love of beauty, and artistic capacity, even granting that they measure intelligence. And supposing that the Italians, for example, measure low on the tests—let us assume that the countrymen of Virgil, Dante, Galileo, and Columbus are inferior in intelligence to the countrymen of Whitman, Longfellow, Edison, and Lindbergh because they fail to reach as high an I.Q.—what about the fact that Italy furnished to the world its finest painters, sculptors, and a full quota of great musicians? What about the fact that almost no native Americans of Nordic stock are found in symphony orchestras? And shall we forget that very fine mechanics are Italian, and that the Italian immigrant is, on the whole, very industrious, honest, and law-abiding, despite the fact that in certain crimes of passion he figures disproportionately? Is there no room for these qualities in American life, and must we use a measure which evaluates only a few qualities as a conclusive guide to our selection of human beings? *In the current utilization of the intelligence tests we have another example of the fact that a good instrument, like a good cause, has more to fear from its friends than from its enemies, for indiscretion and over-enthusiasm are more destructive than open hostility.*

As to the second question, are the qualities that we unify under the heading intelligence and that are measured by the tests really innate and hereditary, or is there an environmental factor in them of great importance, which has not been evaluated? It is a great delight to me to be able to cite one G. Stanley Hall, not unknown to fame as an American psychologist. This is from an article in a magazine called *Plain Talk*, of November, 1927:

"I do not believe it is yet, if it ever will be, possible to test general, and still less native, ability, and I even doubt if there is such a thing as the former. Educators once thought they could give a truly general culture, but most of us now doubt even whether there is any such

thing. Everywhere the range of individual differences widens, and we realize as never before that even the basal traits we all have in common take on most polymorphic forms, and that long before the child reaches the testing age, its entire psyche is conditioned quite as much by what its environment has supplied as by its inheritance. Not only is it already, and perhaps predominantly, eye-, ear-, or motor-minded, but locality, home associates, and so forth have given a certain cast to its interests, have developed some and repressed other of the various powers which constituted its original endowment. All this the group tests ignore. . . .

"Intelligence of the kinds here attested is a very superficial thing. . . .

"All that we have yet been able to test are only a few pebbles on the vast shore, which we have chosen and grouped almost haphazard. The trials tell us nothing of the oscillations between sea and land forces that have brought and shaped the pebbles, where they came from or how, so that we have no knowledge whatever of the solid rocks from which they were torn and made what, and put where, they are."

I will not here amplify the criticism that Hexter and I made of Brigham's work on American intelligence—the very significant fact that in the army tests there was a definite rise with each five years of residence in the United States, so that those immigrants twenty years in the United States did as well as the native groups, merely because immigrants twenty years in the United States were, to all practical purposes, Americanized from the very start. But I refer to the conceded point that the children of parents of superior social status do better in the tests than the children of parents of inferior social status. This has been interpreted as showing that people of superior social status are superior in intelligence, which may be true if they start on equal footing with the people of inferior social status. *But obviously this is not true when we compare immigrant with native born*, especially with those who have been in the United States for several generations. For we see a steady rise in the social status of the immigrant groups; we see the children of the Irish laborer of two generations ago no longer hod-carriers, but in business, in the professions, or in the higher mechanical trades; we see the children of the Jewish needle worker, the children of the beloved object of settlement-house solicitude and aid of a generation ago, in every one of the higher human activities, and zealously aiding the recent immigrant of their race. Each immigrant group starts at the bottom of the social ladder and goes up, first by its own efforts, and second, but not less important, pushed up by the influx of immigrants of a lower social cultural level. One sees this clearly in the changing residence localities of alien groups

in the big cities—the Irish are pushed up and out of the slums by the Jews, the Jews by the Italians, the Italians by the Poles; and the American of three to four generations owes his preëminence in American affairs to the fact that the masses of the immigrants pushed him upward, gave him groups to exploit, sent him from labor to cerebral effort, and his cultural superiority is *in part* a passive result. So it is folly to measure the innate capacity of Americans and immigrants by *Who's Who*, for it takes on an average two generations to produce a *Who's Who*, and the fact that certain racial groups of recent immigrant status are well represented shows their great capacity—that is, if we concede that *Who's Who* measures anything.

So the superior social status of the Anglo-Saxon or Nordic type of American rests not so much on intelligence superiority, but on a natural process which in the mass (not, of course, in individual cases) is partly independent of superior intelligence. But superior social status, for a child of such a parent, means better health, better education—in fact, a milieu that not only gives him access to knowledge (books in the library, good music, good English, family pride and tradition), but actually bombards him with opportunities. No matter how wedded any psychologist might be to the belief that intelligence is independent of environment (which it is not), he would not spare any effort to instruct his child, to set him a good example, to give him summers at the shore and trips abroad. He would be aghast if his child had to live as the children of the immigrants do, and he would expect no good from such a catastrophe. In fact, these early impression, this early good start, *no matter how won*, is favorable to the development of those qualities which make a child measure well in the intelligence tests. That is far from saying that such environment creates intelligence, but it does foster its growth. For intelligence is like every other human function—it grows by use and atrophies by disuse. And the fact that the child of the illiterate Sicilian does poorly in tests and in school as compared to the child of the literate German, or the child of the descendant of the Puritans, must be evaluated with care. If it takes three generations to make a gentleman, it ought to take more to make a scholar.

I do not cite the recent experiments which tend to show that the knowledge and experiences of the ancestor affect the knowing capacity of the descendant (the work of the Russian conditioned-reflex school and of McDougall) because we do not need them to show that the children's teeth may be set on edge by what the parents eat. Superior social status means more calcium and growth rays, means better care of the pregnant woman, means so many things that foster superiority that a book might readily be written on this alone, a book more

practical in value than those that take a single instrument of modest scientific worth and create a social and political cosmogony with it. Kirkpatrick's book is far better than most of the books written on the subjects of intelligence and immigration, for despite his leanings, he has been fair and temperate in his discussions. His book is scholarly and worth while. My criticism amounts to this, *that the instrument which he uses to reach very important conclusions measures one dimension only, and leaves every other dimension unknown, and even in the measurement of that dimension, it gives no real hint as to its origin or what it really means.*

ABRAHAM MYERSON.

Tufts College Medical School.

FAMILY DISORGANIZATION. By Ernest R. Mowrer. Chicago: The University of Chicago Press, 1927. 317 p.

Family Disorganization is a book that has long been needed and that will do a great deal to advance an understanding of the modern family. Without question it gives the first satisfactory interpretation of the statistics of divorce and desertion, and this analysis makes it invaluable to any serious student of American family life. Although a work of substance, it is neither dull nor heavy, but a book that even the general reach of intelligence will find intensely interesting.

The book treats of the confused ideals of our modern family, the world-wide increase in divorce, divorce and desertion in Chicago, the ecology of family disorganization, and the family situation as revealed by case-study methods, with illustrations of a behavior analysis of family disorganization. There is a conclusion as to the problem of the control of family disorganization. One of the impressive features of the book is a case study in tension in family life built upon an analysis by E. T. Krueger.

The author calls attention to a common fallacy of former statistical studies of divorce—the fallacy that results from treating the reasons for divorce as causes rather than as the consequences of family discord—and wisely insists that “no refinement of statistical method can be substituted for objective logical analysis of concepts”. Our present impression in family relationships, as the author states (page 23) is in part a result of the urbanizing of modern life and the construction of the orthodox family upon rural traditions, but this can be given undue stress. Our family relation is, in spite of its apparent disorganization, an attempt at adaptation, not only to urban conditions, but even more to the modern culture which applied science has brought about. It is rather the product of a philosophy of life that the widespread distribution of wealth and leisure has popularized

than the "failure of rural family forms to function in urban life". The slipping of religious control into our family ideals is also a large cause of our present family disorganization. Even if to some readers the author appears to overemphasize the rural-urban contrast in family life, no one would dare eliminate this factor.

The book will stimulate the movement to deal with concrete family situations as a means of gaining insight into the human aspects of family discord. "Statistics of the causes of family disintegration assume the individual, but nowhere do they take him into account as a functioning organism. Such data do not give, therefore, a description of family disorganization as a process in terms either of individual responses or of interaction. Neither do they take into account the fact that the family itself is a changing relationship. Rather they assume that there is only one form of family organization, definitely recognized and fixed. In this way such data imply a categorical conception of family disorganization, rather than recognizing the relative disorganization of all families." Perhaps it will soon be possible for studies of successful adjustments of family difficulties to be published without the risk of hurting the family self-respect of those who have been helped. When this can be done as a result of a changed attitude in married people, with a lessening of conscience and pride in their reaction to an objective statement of their domestic facts, a mass of data on the family problems of intelligent people will be released. At present the family situations of the reading class cannot be used as are the case studies of children among the poor and delinquent. Neither can they be hidden in technical periodicals without the risk that a family adjustment may become complicated again through the discovery of its description. When science is taken as a matter of course by those who are in domestic difficulty—and that time seems not so far away now as once it did—Mowrer's book will be recognized as one of the pioneering influences in bringing about a conduct treatment in place of a moralizing, legal, or statistical interpretation of domestic maladjustment.

ERNEST R. GROVES.

University of North Carolina.

CLINICAL NEUROLOGY FOR PRACTITIONERS OF MEDICINE AND MEDICAL STUDENTS. By Edward A. Strecker, M.D., and Milton K. Myers, M.D. Philadelphia: P. Blakiston's Son and Company, 1927. 410 p.

The design of this volume is to assist the overworked practitioner in the diagnosis and treatment of neurological conditions. For this purpose the authors have made a free translation of a book by Pro-

fessor Hans Curschmann, of Rostock, with various changes and additions to meet conditions in America. The result is a somewhat unindividualized compilation of facts which gives the impression of rather hasty preparation, as shown by the too frequent errors of spelling and expression—for example, "lipoidol", "neurologliar", "phenomenum", and such ambiguous statements as this on page 1: "The structural unit of the nervous system is the neuron with its processes, chiefly axons and dendrons. Nerve impulses pass through the neuron in the same direction." This evidently does not clarify one's conception of the structural unit. Again, on page 303 it is stated that "widening of the palpable fissures and infrequency of winking constitute Stellwag's sign". Such errors, however, can easily be corrected in subsequent editions.

Much more important is the question whether the book fulfils its professed function to render available the simpler principles of neurological diagnosis. There is a brief anatomical section in which many facts of neural structure are stated, but it is unfortunately wholly without diagrams or other illustrations and hence difficult for the uninitiated, to whom it is especially addressed, to follow. Explanatory figures of a simple sort would add greatly to the usefulness of this part of the text.

Following this brief introductory portion is a chapter on method of examination, including lumbar puncture and the uses of electricity, the discussion of the latter too condensed to be of much value. The remainder of the book, beginning with Chapter III, is devoted to a condensed description of individual diseases, arranged without discoverable system. Many of these descriptive statements are preceded by a boxed résumé of the most important signs and symptoms, together with suggested points of chief interest to the practitioner. Such a method is undoubtedly useful as a means of quick reference, but it will hardly help materially in differentiating the various organic disorders.

Among the chapters contributed entirely by the translators are one on neurasthenia, psychasthenia, and anxiety neuroses and another on traumatic conditions. In the former of these a departure from the generally adopted plan is made through the introduction of several case histories with discussion of treatment, together with certain remarks on the theory and treatment of psychoneurotic conditions in general. Although of necessity brief, this chapter should be very instructive to the practitioner who finds himself bewildered by the mass of controversial writing on the subject. Some of the more recent theories are presented in a way that cannot fail to be of value, and one regrets that the American authors could not have given more

space to this phase of the subject, which they are so well qualified to discuss.

There are practically no literature references. The text is dogmatic, no doubt a desirable "fault" in a book of this type, which makes no claim beyond the hope that it will be helpful to the general practitioner. This aim it will doubtless accomplish, but it might have been made more helpful by the occasional use of illustrations and by a less haphazard arrangement of the subject matter.

E. W. TAYLOR.

Harvard University School of Medicine.

HUMAN NATURE AND EDUCATION. By A. S. Woodburne. New York: Oxford University Press, 1926. 292 p.

There is little occasion to write a long review of this book for readers of MENTAL HYGIENE. For them the title is somewhat misleading. It would be more accurate to call the book a conventional educational psychology. The "human nature" referred to in the title consists primarily of the operations of the conscious processes. The emotions, for example, receive a very scanty treatment, and the contributions of the mental-hygiene movement to the understanding and treatment of school problems are ignored.

The author belongs to the functionalist school of psychology. He accepts, as he says, the biological point of view, not for the purpose of dismissing consciousness and the psychic with a wave of the hand, as do many American psychologists, but rather because it enables him "to study psycho-neural reactions from the developmental standpoint, beginning with the simpler reflex reactions, and proceeding towards the more highly complex, such as are involved in the higher reasoning processes".

Accordingly, the book begins with the customary treatment of reflex and instinctive behavior. These reactions Professor Woodburne, in common with the older psychologists, explains in terms of heredity. Since he has education in mind, he adopts a fivefold classification of instincts: reactions connected with securing food, with mating and procreating, with self-preservation, curiosity, and gregariousness. Watson's investigations of instincts in children do not enter the discussion, nor does the biological point of view represented by such biologists as Jennings and others, who question the traditional conception of an insulated heredity, receive consideration.

This conservative and conventional position is followed consistently. Thus in the chapter, *The Nature of Intelligence and Methods of Measuring It*, Professor Woodburne quotes Ballard approvingly when the latter states that intelligence is "ability as distinct from knowl-

edge, capacity as distinct from content, power as distinct from product". Since, however, he also concludes that there is little evidence to sustain Spearman's theory of general intelligence (inclining rather in favor of a modification of Thorndike's specific mental abilities) we are left to puzzle over the nature of this contentless entity which can nevertheless be measured rather precisely. The discussion is better as a general account of intelligence testing than as an illumination of the nature of intelligence. And here, again, we find little reflection of the very cautious attitude psychologists are now taking toward intelligence testing as a means of determining innate ability.

The following chapter headings indicate the subsequent trend of the book: *The Feelings; Attention and Its Control; The Learning Process; Habit Formation; The Memory Processes; The Associative Tendencies; The Perceptual Processes; Imagination; The Will; The Psychological Basis for Instruction; The Old Examination Versus the New; The Achievement of Personality.*

The chapters that deal directly with the applications of psychology are rather elementary and general in character and by no means constitute a significant contribution to the literature either of psychology or of education.

V. T. THAYER.

Ohio State University.

CHILDREN'S READING, A GUIDE FOR PARENTS AND TEACHERS. By Lewis M. Terman and Margaret Lima. New York: D. Appleton and Company, 1926. 360 p.

This is a guide to children's reading of a very valuable and distinctly modern variety. Book lists for children have in the past been based for the most part on the judgment of adults as to the types of literature that children ought to read and from which they might be expected, in grown-up opinion, to derive profit. But this list is based on an actual study of the reading of children of to-day. The authors explain in the preface: "This book is based on an experimental study of the qualitative and quantitative aspects of children's reading, with special reference to individual differences caused by age, sex, intelligence, and special interests. Approximately two thousand children were studied. Data were obtained from three sources—namely, the home, the school, and the children themselves."

In an appendix a brief account of the methods used in collecting data for the book is given. From the parents, estimates were obtained as to the number of hours per week spent by their children in reading—that is, voluntary reading, aside from school work—at successive age

periods. Questions were asked regarding the age at which each child first learned to read, and the extent of the home library. From teachers, were obtained comparisons of each child with the average child of his age in regard to amount of reading and samples of books voluntarily read during the year. The children themselves—nearly two thousand in number—kept for a period of two months a record of their reading, indicating by checking a printed report sheet the degree of interest that each book read held for them. The children also filled out interest blanks, indicating the general types of literature that they liked best, the books most enjoyed during the past year, and the magazines that they were in the habit of reading. On the basis of the great mass of data thus collected, the book was prepared.

The book list itself is preceded by ten chapters of discussion of children's reading interests, occupying a quarter of the book and covering such topics as why children read, the development of reading interests, individual interests, sex differences, differences dependent on intelligence level, and so forth. The last two chapters evaluate the characteristics of the undesirable book and of the desirable one. These discussions are extremely interesting, and offer much valuable insight to parents, teachers, librarians, and all others whose interests are concerned with child development. The presentation is clear and concise and refreshingly devoid of the sentimentality that so frequently creeps into guides to childhood.

The booklet proper covers a wide range of subjects. Books are classified according to subject matter and type, and each title is annotated. In the margin opposite each title, where the eye catches it readily, is given the age range within which the appeal of the book will probably lie—toward the lower age limit for the precocious child, near the upper figure for the retarded one, and midway for the average child. The best books in each group are starred. The proportion of fiction included is relatively small, as book lists for children go, and scientific and industrial subjects are given a relatively higher proportion of titles. History, biography, and travel are extensively treated, and there is an excellent section devoted to poetry, art, music, and the drama.

The last section gives a list of supplementary reading for schools, and is arranged by grades, from one to eight. It is followed by suggestions as to how schools may coöperate in the observance of Children's Book Week, including a number of Book Week projects. At the end of the book is a list of publishers and their addresses, and full author and title indices.

The selection of titles has not been determined solely by findings as to the actual reading preferences of children, but has been qualified by

consideration of the intrinsic value of the books. The authors acknowledge indebtedness to other book lists and guides. They remark: "We might almost say that our list is not so much a list of what children read as it is a list of worth-while books that children would read if they were given the opportunity to do so. No one child could be expected to show an interest in all the books given, but parents and teachers should be able to find in it books that would appeal to any child, whatever his age, training, or special interests." Children's preferences must be considered, but not too slavishly. "We have felt ourselves under no obligation to include an inferior book simply because children by the thousand have found it interesting. Many adolescent girls crave pickles and all children like chocolates, but the dietitian would not for this reason give pickles and chocolates a very important place in children's menus. No more, we believe, should those who prepare 'menus' for children's reading yield too much to this kind of temptation.

"All this is far from saying that children's reading preferences should be given but little weight. On the contrary, these will ever remain our most important single guide. Just as the demand for chocolates suggests a need for legitimate sweets, so the demand for a second-rate or harmful book may suggest needs which it is often possible to supply by literature which is entirely unobjectionable."

Children's Reading is a helpful and valuable contribution to the study of child development. Parents, teachers, and children's librarians will welcome a guide to children's books that has so sound and safe a basis in valid child psychology.

JESSIE C. FENTON.

Athens, Ohio.

GOOD MANNERS FOR CHILDREN. By Elsie C. Mead and Theodora Mead Abel. New York: Dodd, Mead, and Company, 1926. 157 p.

One approaches a book on good manners for children with some distrust, for a too conscious and deliberate emphasis on formal etiquette in the training of children is not unlikely to involve too much repression of instinctive tendencies and impulses that require expression if an entirely wholesome personality is to develop. This little book, however, proves to be on the whole sensible and wholesome in attitude and grounded on a fairly adequate acquaintance with child psychology, though not, obviously, on a thorough knowledge of it.

The first section is concerned with a rather general and very brief discussion of some of the principles of child training, especially with reference to habit formation. The principles laid down are sound, though there is always danger in too brief a presentation of subjects

so subtle and so important as these. Then follow specific directions for teaching various types of "good manners". Among the first of these discussions is one with which I should vigorously disagree. Say the authors: "If we were asked to list the most important table manners for very young children, we should say first, 'No talking, unless spoken to.'" This they justify on the grounds that the little chatterer will not get enough to eat if he is allowed to talk. The chatter of a small child at table is indeed likely to be incessant, and perhaps annoying to his elders, and it may be advisable to control somewhat his too eager conversational impulses; but if a child is allowed to be present at the social gathering of a family meal, to allow him to speak only when spoken to is an unjustifiable and unwholesome repression. Such a measure is a violation of the principles of mental hygiene in child care, and, incidentally, it is not even "good manners", for speaking only when one is spoken to is surely an inadequate type of social response, and the enforcement of such behavior in childhood is not likely to be conducive to the latter acquisition of a pleasing social ease in conversation.

This is the only instance of so flagrant a violation of mental hygiene, though there is throughout the book an over-insistence on the value of quietness and the undesirability of noise. Pleasure in the production of noise is a normal and natural part of child nature, and children need to be allowed an opportunity for its expression. It seems likely that the child whose upbringing is too strictly modeled upon this guide must suffer somewhat from over-repression in this regard.

The book will probably prove useful in suggesting to mothers a list of those social amenities which may profitably be inculcated during childhood. But its rules need to be applied with discretion, and the mother should supplement its directions by a study of some more adequate discussion of the psychological background of child training than is here presented.

JESSIE C. FENTON.

Athens, Ohio.

THE THEORY OF THE GENE. By Thomas Hunt Morgan. New Haven: Yale University Press, 1926. 343 p.

In the general advance of biology toward the status of an exact science, genetics—the study of heredity—is well toward the front. As Morgan says, "The modern theory of heredity is derived from numerical data obtained by crossing two individuals that differ in one or more characters." The gene is an invisible, postulated element, like the electron; but its qualities are derived "from the numerical data alone". Thus Professor Morgan, in writing an authoritative

book on the gene, presents to the reader a complete, orderly account of biological heredity in so far as it has been investigated by the methods of quantitative, exact, and statistical inquiry. There are, of course, many details of inheritance that are not as yet fully understood; and complicated instances—such as most human crosses—cannot be fully analyzed. Yet the essential elements in the process of biological heredity seem to be clearly established, and control and prediction are fully possible in simple cases.

What Morgan calls the theory of the gene comprises the two familiar laws of Mendel, together with such principles of more recent discovery as linkage, crossing over, and the linear arrangement of the factors (genes) in the chromosome. The purpose of this book is to show how this theory brings into rational relation the Mendelian principles, the experience of breeders, the phenomena of sex determination, the theory of mutation, and such newly discovered processes as chromosome reduplication.

The reader who is reasonably familiar with genetics as presented in the textbooks will find Morgan's book especially valuable for its clear treatment of recent lines of research. The work, for instance, on peculiarities of sex determination and on sex reversal should be of especial interest to psychiatrists, who will want to know how intersexes (Chapter XVI) are treated under the chromosome theory.

Heredity change—i.e., evolution—seems to be accomplished by a change in the number of chromosomes or by a change within a chromosome—both commonly referred to as mutations. This idea, with the various considerations that it leads to, the question as to whether or not mutation really is loss or degradation, and the suggestion that genes are "organic chemical entities", are fully discussed and summarized at the end.

Professor Morgan writes with exceptional clearness, and his work is well and fully illustrated. There is a very full bibliography and an adequate index.

H. M. PARSHLEY.

Smith College.

THE DRIFTING HOME. By Ernest R. Groves. Boston: Houghton Mifflin Company, 1926. 217 p.

Professor Groves states in his preface: "This book treats some of the outstanding social problems of the home, but without pessimism as to the future of the home and, I trust, without exaggeration of its present needs. It aims to contribute to the growing belief that education must in some form undertake the task of constructing the better home of the future."

In general, this sums up the trend of this book of nine chapters, four of which have appeared in somewhat shorter form as magazine articles. Although one notes a certain amount of repetition and the somewhat disconnected quality that is bound to occur in a series of papers, the book is written in the author's usual excellent style with the wealth of colorful and apt illustrations that always make his books readable and stimulating. While for the most part *The Drifting Home* is a critical statement of the social problems that affect the home to-day, it presents many constructive points of view through the contributions of modern psychology, sociology, and mental hygiene.

The first chapter discusses the three kinds of American homes—the good, the bad, and the bewildered, the last peculiarly representative of present social life. The effect on the bewildered home of a craving for luxury due to the distortion of true values is emphasized not only in the first chapter, but throughout the book. The chapter on the social influences that affect home life takes up very briefly such social changes playing upon the home as the passing of man's dominance, voluntary parenthood, the new tasks placed upon the schools, the modern opportunities for material culture, and the increase of leisure for women through commercial devices.

In the chapter, *What Can the Family Do?* the author describes how the family has risen from the position of maid-of-all-work to that of administrator; instead of attending to all the details of the child's care, it supervises the work of the underlings to whom it has farmed out its interests. Particularly interesting to parents is the discussion of the functions that are still inherently within the realm of the family, such as those of interpreting rather than administering resources, directing interests and activities, stimulating its members to make the most of opportunities, and "fellowshipping" with the child.

The short chapter, *The Home; A Human Need*, stresses the fact that while the home has surrendered some of the enterprises it managed when it was adjusted to a rural type of life, it still holds its unique position as the most effective means of satisfying human needs as they arise in the yearnings of man, woman, and child. Following this, the chapter, *Grinding Down the Middle Class*, states clearly and with well-founded statistical backing that the decrease in the birth rate appears to be concentrated in the middle class, and that this situation cannot be remedied so long as the cost of medicine, education, and so forth, "grind so exceedingly fine" with this group that they cannot comfortably have more than two children.

Youth Speaks presents in virile manner the revolt of youth against the control of parents and school, and comments frankly on the present-day pedagogy with "an itch for meddling" which "makes

some children docile and the rest eventually rebels". In referring to the form of self-expression prescribed by school strategists, it brings out the fact that "suggestion and prescription, even when skillfully manipulated, are merely more subtle kinds of coercion".

The last three chapters—*The Home Under the Microscope*, *Parents Who Haven't Grown Up*, and *The Future of the Home*—contain many suggestive illustrations of unsatisfactory home life, with Professor Groves' brief, keen analysis of the root of the difficulty in each case. The "companionate" and the home as contending for popular favor in the near future are graphically portrayed in the last chapter.

The social worker will regret that Professor Groves has not caught the drift of the best thinking that is taking place in social work to-day. Certainly no group has more real appreciation of the practical as well as the theoretical issues that the author is discussing, and no group has more at stake in helping the family to assume responsibility for its own affairs. It is, therefore, unfortunate to imply that social workers universally express a practical skepticism in regard to the possibility of developing wholesome parenthood, and "at every opening are trying to enroach on what was once parental responsibility".

Philadelphia Child Guidance Clinic.

ALMENA DAWLEY.

MENTAL GROWTH AND DECLINE. By H. L. Hollingworth. New York: D. Appleton and Company, 1927. 396 p.

This book is a comprehensive and at the same time compact survey of the development of the individual from conception until death, with a commentary on the survival of personal influence after death in social institutions. The word "mental" in the title is used in its broadest meaning, so that the book summarizes our present knowledge of the development of intellectual, emotional, and all other traits that can be classed as psychological. The amazing thing is the succinct manner in which the material is reported, in spite of which there are very few omissions of important data.

Dr. Hollingworth classifies the stages of human development as follows (page 45): (1) The germ plasm; (2) the fetal period; (3) the infant, the "neonate", in its first few weeks of life; (4) babyhood, the first three years; (5) the questioning age, centering about the time of school entrance at the sixth year; (6) "Big Injun" age, culminating at about the eleventh year; (7) "The Awkward Age", the adolescent or high-school years; (8) maturity, the period of economic and domestic responsibility; (9) senescence, the period of decline in old age; (10) post-mortem age—"that period, brief or prolonged, in which the personal influence of the individual persists and the institutions he has had a part in establishing remain effective".

Although covering such a wide field, the book is for the most part accurate and thoughtful. It describes normal development, mental deficiency, abnormalities, and the supernormal, with the emphasis, as it should be in a work of this nature, upon the first mentioned. One of the good points is the careful way in which the author tries to distinguish, wherever possible, between the intrinsic and the extrinsic factors that enter into the determination of mental growth—i.e., between those that are hereditary and those that are environmental.

Another excellent feature of the book is its attention to the mental hygiene of all these developmental stages. Each chapter contains a statement with reference to the mental-hygiene needs of the particular age. The advice given in this connection is generally excellent, but the reviewer cannot forbear to question the suggestion that grandparents be allotted the care of their grandchildren. It is perhaps true, as Dr. Hollingworth remarks, that this would free the parents, particularly the mother, for economic pursuits, and that it would give to the aged an interest in life, which is one of their great lacks. But we are not convinced that it would be conducive to the mental hygiene of the children. It may be true that "grandparents are full of wisdom and experience" (page 323), but it is not necessarily the wisdom and experience that would be approved by a pediatrician or specialist in child psychology. The author might perhaps argue that grandparents, instead of parents, might join child-study groups and read the modern literature on bringing up children, but their resistances to new methods which ran counter to their own customs and early teachings would not be easily broken down and the new material would not be assimilated readily.

It is an unusual book with which no more fault can be found than the above criticism. Yet the present reviewer has no other to offer. Indeed, one finishes the reading of the book with admiration for Professor Hollingworth's knowledge of the whole field of psychology, including psychoanalysis (which was for so long a taboo subject to many members of our profession), behaviorism, laboratory experiments, and clinical data.

PHYLLIS BLANCHARD.

Philadelphia Child Guidance Clinic.

CHARACTERISTIC DIFFERENCES IN BRIGHT AND DULL PUPILS. By Harry J. Baker. Bloomington, Illinois: Public School Publishing Company, 1927. 118 p.

What puts this book on one's reading list, not only for one's self, but as something to recommend to one's friends, is expressed precisely in Dr. Baker's own words—it is "an interpretation of mental differ-

ences, with special reference to teaching procedures". Many teachers who have in their continued search for knowledge found themselves at a loss because nothing of practical value has been offered them beyond the fact that measurable differences exist will discover in this short volume many clues to the solution of their teaching problems. The suggestions of some five hundred teachers of special classes for both dull and bright children are here integrated with the conclusions reached by the psychologists and field workers of the Detroit Psychological Clinic. Not every statement which comes from the teachers has yet been proved, we are carefully told, but plans are laid for following with further research the still debatable questions. Every effort has been made to translate into working terms the fully accepted facts of individual differences in general intelligence.

As the teaching methods in ordinary use most nearly fit the average group, Dr. Baker's inquiries to teachers concerned the deviates whom we have so far recognized as to label them with an I.Q. and a classification, but whom we have to a large extent still required to learn the usual material in the usual way. By his use of the word "interpretation", Dr. Baker affords a description of mental differences in qualitative terms, whereas they are commonly presented in quantitative terms. The exceptions to this are in the feeble-minded and the genius groups, for whom we have made qualitative changes in curricula and method. These two groups and the normal group are omitted from the discussion, leaving two other significant groups for consideration. One is the dull group, with I.Q.'s between 70 and 90; the other is the bright group, with I.Q.'s between 110 and 130. It is clear to all who deal with children of school age that those who belong to either of these groups justify some special provision which is not offered by ungraded classes or by Terman opportunity classes for very superior children.

The discussion revolves about three points. First there is a summary of the differences and similarities in general intelligence as they are estimated by the most efficient special teachers, followed by two chapters on similarities and differences in the so-called special abilities. This lays the foundation for the chapters on technique and administration, as it gives in generalized form what is brought out in concrete instances later. The fallacies of subjective judgments are pointed out and the law of compensation for inferior intelligence by special abilities is laid bare as a pleasant, but false philosophy, because without exception the superior child carries off the honors in all fields. There is a difference in the interest with which he attacks routine matters, but there is every indication that his potentialities in this, as in other functions, are of the highest. The ability of the

bright child to deal with abstractions and work toward a remote goal is contrasted with the need of the dull child to form specific bonds in small, short units with immediate ends. These and other points of difference are linked to the possibilities of social adjustment, indicating why the dull person is less social than the bright citizen in his point of view.

The reviewer was at first inclined to think that Dr. Baker is too optimistic about the objectivity of the supernormal individual, but after a close survey of the entire book decided that his emphasis lay rather on the potentials of the situation than on present conditions. At intervals throughout the discussion there runs the feeling that education in school must more nearly approximate conditions in the world outside, and that the training we now provide our supernormal children does not fit them for reality. Before developing the chapters on educational characteristics, certain personality and conduct difficulties are explained as the *result* of unsuitable teaching procedure and not the *cause* of failure to learn.

The second part of the book consists of discussions of general differences in subject matter as greatly enriched by suggestions for specific subjects as our present knowledge permits. An attempt to summarize these chapters would be folly, except to say that reading, spelling, handwriting, English, library work, arithmetic, auditorium activities, nature study, social science, domestic science, manual training, health education, art, and music, are each considered for both the dull and bright groups. The underlying differences are brought into clear relief by means of concrete examples. An apology is offered for the meagerness of the material available at present, yet the intelligent, imaginative teacher and supervisor will profit enormously from just this much suggestion. Here are carried into action the basic principles that dull children learn by direct guidance and by rote, bright children with resourcefulness of their own and in large units; that the former must be guided and helped to make decisions while the latter enjoy the free play of their initiative and take responsibility intelligently; that social maturity of interests may exist with retarded intellectual development, and, most serious anomaly, emotional and social immaturity may be found with great intellectual precocity; that the dull pupil who is going to find it difficult to adjust to society or who will make foolish judgments in the exercise of his citizenship needs training so far as he can profit by it; that the superior pupil must be prepared for the leadership which he will fall heir to by developing a level of social development equal to his intelligence. In connection with this broad outlook, it is encouraging to see physical education and the fine arts included as two of the

essential subjects. Evidently the days are over when gym and drawing were considered by dull and bright pupil alike as unimportant, snap courses in which neither failure nor a string of 95's was of any significance.

We are not all as sure as the author that superior pupils tend to drill themselves at the points where they need it, or that they make their own corrections in such mechanical matters as handwriting, without considerable struggle. If this is the concurrent opinion of five hundred teachers constantly in the field, we can accept it as a general tendency. Yet the deviations are frequent, and each super-normal child is of such importance to society that we prefer Dr. Baker's second emphasis—that rote learning can be motivated and incorporated in other material so as to be of interest even to the highly endowed child.

In the third section of the book the basic differences and similarities are reviewed, this time from the teacher's point of view—ways in which she must plan her work according to the kind of children she is teaching; social attitudes toward dullness and brightness; division of pupils in such a way as to provide for all types of intelligence at all grade levels. The Detroit schools have at hand standards for promotion for each of the three groups, dull, average, and bright, in arithmetic, writing and reading, social science and spelling, for the first six grades. The standardization will be extended and eventually available to members of other school systems.

Great as the need is for such books as this to reach principals and teachers, it is of more importance for the message to become part of the training-school program. In Dr. Baker's words: "In the last analysis, the successful education of all pupils depends directly on the teacher. Her training, her attitude, and her adaptability are factors of extreme importance."

JEANETTE REGENSBURG.

New York School of Social Work.

PRINCIPLES OF EMPLOYMENT PSYCHOLOGY. By Harold Ernest Burt.

Boston: Houghton Mifflin Company, 1926. 568 p.

There have been a number of new books on the subject of employment psychology, but in the opinion of the reviewer no one of them equals, when all is considered, this present work by Dr. Burt. He includes in his book much of what may be found in others, but in a more interesting manner and with a little better appreciation of the values of the various topics. The main virtue of the book is that it does not insist upon a mechanistic use of psychological tests or the interpretation of test scores. The author appreciates the fact that

many variables, outside of those measured by the tests and treated statistically, are of great importance in the selection and guidance of workers. He also is aware that one must often make many allowances when interpreting and applying test scores. He discusses the philosophy of employment-psychology methods, expresses his attitude toward the rationale of their use, and feels keenly that the purpose for which psychological methods are employed is of as great importance as the methods themselves.

To one interested in mental hygiene this book of Dr. Burt's is indeed welcome and the social breadth of the author's point of view is encouraging. He says, "The broad movement to study man has just begun. Psychology is now playing an increasing rôle in the school, in the clinic, in the advertising agency, in the factory, and in the employment office. These problems of life adjustment are coming more and more to the front. The last century was characterized by tremendous advances in the natural sciences and in the technologies. The present one bids fair to be an era for human engineering. The psychologist's ideal is to have every one provided with the opportunity to do that particular part of the world's work for which he is best adapted and in which he is most interested. When this ideal is achieved, the world will be a happier place for all of us."

HENRY B. ELKIND.

Massachusetts Society for Mental Hygiene.

EXPERIMENTAL PSYCHOLOGY. By M. Collins and J. Drever. New York: E. P. Dutton and Company, 1926. 317 p.

A FIRST LABORATORY GUIDE IN PSYCHOLOGY. By M. Collins and J. Drever. New York: E. P. Dutton and Company, 1927. 108 p.

The authors suggest the use of these companion volumes in an introductory course in psychology. The first is designed for an elementary textbook in such a course; the second is a laboratory text which is intended to introduce the beginning student to elementary psychological experimentation.

The reviewer is of the opinion that both books are somewhat difficult for American students just beginning psychology, who are, in his experience, usually of freshman or sophomore rank. This is especially true of the laboratory guide, in which, for example, Experiment 4 would be an impossible assignment for students in such an elementary course.

A frequent procedure in American universities is to give an introductory course in general psychology and also to offer an elective course in experimental psychology for which the introductory course is a prerequisite. For such a course as the latter, *Experimental*

Psychology would be a very desirable text to use. It would be a matter of individual concern among American psychologists whether they would want to choose the laboratory guide above other similar books now available.

Experimental Psychology contains chapters on the various senses, perception, attention, action, work and fatigue, suggestion, feeling and emotion, imagery and association, learning and memory, imagination and thought, language, and mental testing. There is also an introductory chapter giving the history of psychological experiment and a discussion of statistics. The book has an index, a useful appendix, and a suggestive bibliography. It is extremely well written, being both understandable and interesting. In addition to its use in college classes, it should serve as a valuable text for the use of physicians and others who wish to learn about recent developments in experimental psychology.

Ohio University.

NORMAN FENTON.

A BIPOLAR THEORY OF LIVING PROCESSES. By George W. Crile, M.D.
New York: The Macmillan Company, 1926. 405 p.

The purpose of this book, as the author states, is "to present certain evidence, and discussions based upon that evidence, in support of the theory that man and animals are bipolar mechanisms, and that the organism not only is driven by electricity, but that it was originally created and constructed by electrical forces". This evidence consists of certain generally conceded scientific principles together with many observations made by the author and his co-workers in various fields of scientific investigation.

Life is considered to be a dynamic rather than a static phenomenon, and energy, rather than form, is its chief manifestation. Electricity is the great force and histological structures are of minor importance.

There are nine prime characteristics common to all living organisms, and upon a knowledge of them the theory is built. There is a syncytium penetrating the entire organism which carries impulses among the organs, cells, and parts of cells. There are "lipoid films", which surround cells, nuclei, nucleoli, and micellæ, and on these films electric charges are stored. The acid-base balance is a constant factor. Living tissues have a certain "electric capacity"; "electrolytic contents" and "electric phenomena" are always present. The law of the conservation of energy is obeyed by the living as well as by the non-living transformer. Irritability, assimilation, and reproduction are electric phenomena. The structure of molecules and atoms of living systems is that of a crystal, but the lines of force of the living systems are dynamic rather than static. From this, life is explained.

To begin with, a single cell is a bipolar mechanism because of its structure and function. The nucleus, which is comparatively more acid than the cytoplasm and less acid than the nucleolus, is separated from these structures by thin lipoidal membranes. Because of its lipoidal character, such a membrane would have a high capacity for oxidation, and because of its high dielectric constant, it would have a great capacity for the accumulation of electric charges. Oxidation within the cells results in the production of H and OH ions, and the storing up on the dielectric membranes of the electric charges that accompany these ions represents the potential capacity of the cell as an electric unit—really a Leyden-jar type of condenser. When many cells are connected together either in series or in multiple, the electric charge is tremendous because of the great surface area of the lipoidal membranes of so many cell bodies, nuclei and nucleoli.

But this in no sense represents the total surface area of the semi-permeable membrane in cells, for the very nature of protoplasm is a complex structure containing tremendous areas of lipoidal membrane, since all the micellæ of colloids are surrounded by such a membrane. The electric charges are stored on these dielectric films and remain in an electro-static condition until disturbed by an external stimulus. In the nervous system, for example, the white matter between the cells is a lipid and is truly dielectric. Like the films around cells, this white matter also contains electrolytes like potassium, calcium, and phosphorus, which offer passage to an electric current. Since molecules are oriented along the direction of the flow of current, certain molecular patterns are laid down on this lipid substance as ions of potassium, for instance, are progressively displaced from molecule to molecule along the path of the oriented lipid molecules, so that a chain of potassium remains to constitute the essential conducting characteristics of the nerve paths. With a change in external stimuli, the electro-static condition is disturbed, and with a return to the original set of conditions, the original electro-static pattern returns, and this now familiar arrangement of molecules is the basis of memory.

In the same way that a cell or an organ represents a bipolar mechanism, the organism as a whole is also bipolar. The central nervous system is the organ of highest metabolism and has the highest degree of positivity. The liver represents its antithesis and is the center of negativity. As the difference in potential between the two is great, the possibility of electrical reaction is consequently great and the organism can function as a single enormous battery.

And so it goes on. Clinical phenomena are interpreted in this light. Cancer is explained quite logically after the rather hazy premises are admitted. The heretofore mysteries of reproduction are quite satisfac-

torily dispensed with and everything takes place according to the functioning of the condenser-oxidation-bipolar arrangements. Many at first seemingly unrelated processes are analyzed, and from the result of the analysis the theory is built up in the conventional inductive manner. Some of it is obviously scientifically true, some of it is highly speculative, but just as obviously true, while some of it seems like the purest armchair philosophizing.

The subject matter is interestingly presented and with sufficient repetition to make the author's points clear. The book is richly illustrated and contains a scholarly appendix of a highly mathematical nature, and a rather imposing bibliography.

L. RAYMOND MORRISON.

New York State Psychiatric Institute.

THE NEW LEADERSHIP IN INDUSTRY. By Sam A. Lewisohn. New York: E. P. Dutton and Company, 1926. 234 p.

Mr. Lewisohn has written this book from the point of view of an experienced business executive with markedly psychological leanings. He feels that the fundamental pivot about which economic phenomena move is the human factor, and he is, therefore, thoroughly convinced that a knowledge of the human factor is just as essential to the equipment of the modern industrial executive as a knowledge of the physical sciences, economics, and engineering.

This book is specially interesting to psychiatrists because of the inclusion of a unique chapter on the mental hygiene of employers. In this chapter Mr. Lewisohn points out that practically all of the recent literature on mental hygiene in industry has concerned itself with the mental hygiene of the workers. In the opinion of Mr. Lewisohn—and his opinion is certainly worth giving heed to—the major emphasis should be on the mental hygiene of the employers.

The book is worth reading whether one is in direct contact with industry or not and especially so because the author, while a capitalist, is not without insight into the common biases that affect the mind and behavior of the capitalist. He tends to see both sides of the struggle between what is commonly called Capital and Labor and recognizes that the attitudes of both are largely determined by ideas and beliefs that have long outgrown their usefulness.

Mr. Lewisohn looks forward to a stabilized and satisfactory industrial system if a new leadership, psychologically sensitized, becomes more general, and he discusses in some detail the education of the new type of manager. Such chapters as *The Football of our Emotions*, *The Capitalistic Obsession*, *The Mental Hygiene of Employers*, *The Education of the Manager*, *The Employer's Responsibility to the*

Community, Employee Representation as an Aid to Management, Harmonizing Unionism and Industrial Effectiveness, The Modern Employers' Wage Policies, certainly give an indication of how interesting the book will prove to the reader.

HENRY B. ELKIND.

Massachusetts Society for Mental Hygiene.

A SOUND ECONOMIC BASIS FOR SCHOOLS OF NURSING. By Mary Adelaide Nutting. New York: G. P. Putnam's Sons, 1926. 372 p.

For any one who is interested in studying how professions are made—their struggles, development, mental processes, obstacles, and achievements—here is a stimulating example, unique in many respects, but well worth analysis because of its general as well as its obviously special significance. This collection of the papers and addresses of one of the great pioneers and leaders in her field constitutes an unusually dynamic history of nursing, not only covering the twenty-five years during which the material originally appeared, but, through constant reference to and recapitulation of the early beginnings of nursing as a profession, completing the picture and tracing its development step by step.

In this book Miss Nutting not only reveals herself again as an historian, with all that this implies of keen analytical insight into causes and results, but also as a fearless leader and a far-seeing prophet. It is not only past history with which she deals, but history in the making. Prophecies and visions of what ought to be, outlined in some of her earlier papers, are found fulfilled in those toward the end of the twenty-five-year period. Endowed schools of nursing within universities, giving their own degrees, with the same standing and recognition in the university as other professional schools—twenty-five years ago this seemed a fantastic dream! And yet Miss Nutting was a very practical dreamer, for she was a constructive fighter as well. How she herself bent all her energies to make her dreams come true is evident in these papers, especially evident to those who have watched her work and know her achievements.

Of necessity any such assembling of material produced over a period of time contains considerable repetition. This makes the volume of particular use as reference material for general scope and special detail rather than as a book that is a complete unit in itself. However, such papers as the first, *A Sound Economic Basis for Schools of Nursing*, and *Nursing and Its Opportunities, The Responsibilities of Hospital Trustees, The Evolution of Nursing Education from Hospital to University, How Can We Care for our Patients and Educate the Nurse?* and *Thirty Years of Progress in Nursing*, should all be

read to gain a true picture, with perspective, of the development in this field of nursing education.

Such a book as this should definitely serve three groups. First, the general public and members of other professions, particularly those closely related, as physicians and social workers, need more real knowledge—more facts and more careful consideration of these facts—of just what are the problems involved in educating young women to meet the opportunities and responsibilities increasingly found in nursing. Probably no members of a profession have been more often extolled, and more often condemned, than nurses. They are alternately referred to as “angels of mercy” and clearly described as the opposite. The demands of the general public and of these other professions and their criticisms, both of which may be justified, would be softened by greater understanding. How many can answer the following questions: Who pays for the education of a nurse? How is she taught, and how does this compare to the educational system of other professions? What is expected of the nurse after she graduates and in how far does her present education prepare her to meet this situation? How much responsibility does the hospital assume for the education of a nurse? Who are the ultimate losers in the present situation—the public, the hospital, the nurse? These are some of the questions with which Miss Nutting’s paper challenges our thinking and to which she suggests many of the answers. She says, “No one seems to have seen the logical results of placing schools so completely in the hands of those whose main object in desiring control was not the education of students, but the use of them to serve hospital needs. One of these results, the most serious and far reaching of them, has been the indoctrinating, as it were, of whole generations—the public, physicians, hospital authorities, and nurses themselves—with the idea that the education of nurses differs from other forms of professional or vocational education. It is astonishing how few there are who realize that the principles and policies which have gradually been developed and established in the conduct of education and of professional training generally apply at all to the training of nurses, and that the safeguards which it has been found necessary to throw about students of other vocations are equally necessary for them.” With a vivid and convincing style Miss Nutting analyzes all phases of this profound problem, which is of equal importance to those outside of the nursing profession. This book should lead to intelligent understanding and helpful coöperation from these groups, which is essential to the further development of nursing along sound and productive lines.

Throughout her analysis, one basic and underlying problem is

stressed: "Back of our problems in nursing lies a great root problem which governs the whole situation. It is an economic one, and before nursing can render its full service to the world, this problem must be given most serious and scientific study and must be in some measure solved." And never does Miss Nutting lose sight of the fact that the ultimate goal is service. In fact it is the ever-widening opportunities for this service that necessitate a readjustment in the preparation for it.

For hospital administrators, hospital trustees, and those directly responsible for the conduct of schools of nursing, this book, or portions of it, might well serve as a manual of procedure. The place of the school of nursing in the hospital, its relationship to other hospital departments, the content of the nursing course itself, and many specific practical problems in connection with this, are discussed in considerable detail.

Finally, to nurses themselves such a book must prove a tremendous inspiration and a real stimulus to new effort. Never for one instant does one feel that the interest in and effort for sounder education for nurses is for any narrow or selfish reason. The description of past struggles, of progress made slowly and only through the exercise of patience and intelligent persistence, with constant emphasis on the increasing responsibilities and opportunities in nursing, makes it impossible for nurses to view the situation except with devotion and a renewed sense of consecration to a great cause and a great service. To nurses Miss Nutting gives this message. "Our golden age, however, is not in the past, it is in the future, and the best inheritance we can carry over from the past is the spirit which has brought us through these difficult years, with undiminished courage and unshaken faith in the beliefs and principles for which we have striven, the spirit which leads one to seek ever for a better way, leads one to question, to search, to grope for the right solution to the difficult problem. Guided by it one may falter, one may fall, but the spirit which giveth life survives error, survives even failure. It alone leads to progress."

KATHARINE TUCKER.

The Visiting Nurse Society of Philadelphia.

AN EXPERIMENTAL STUDY OF CHILDREN AT WORK AND IN SCHOOL BETWEEN THE AGES OF FOURTEEN AND EIGHTEEN YEARS. By Helen Thompson Woolley. New York: The Macmillan Company, 1926. 762 p.

In 1910 the state of Ohio passed a child-labor law which required that every child must complete the fifth grade before leaving school. The law provided for the issuance of employment certificates by the

school for specific positions which conformed to the restrictions of the law, and also provided that part-time schools be established for children who had not completed the eighth grade and who were employed under certificate. Thus the school had authority over all children until sixteen years of age, both those who had left to go to work and those who remained to continue their education. These circumstances gave the opportunity for carrying out the investigations reported in this study. The superintendent of the schools of Cincinnati and others who were interested in this part of the law decided that a careful comparative study of the physical, mental, and social status of those children who were leaving school to go to work and those who were remaining would make a valuable contribution to education and child psychology, and also permit a more intelligent administration of the law; consequently, Dr. Woolley was invited to conduct such an investigation. This volume is a report of her careful experimental work.

Each of the groups studied consisted of a random selection of about 800 native-born white children between fourteen and fifteen years of age. For the working group, this was about one-third of the total number of this age who came for employment certificates, and was considered a fair sample. In order that the two groups might be as nearly comparable as possible, the school group was chosen for the most part from those schools which were sending the largest number of children into industry. The measurements of the boys and girls of each group were tabulated separately so that possible sex differences could be noted and norms established for each sex. As many of the children as could be secured were tested over a period of five years, so that age norms on the different tests could be established for ages fourteen to eighteen inclusive. These norms are reported for each of the different tests in a percentile range of twenty divisions.

The physical measurements made on the two groups were for height, weight, vital capacity, strength of the hand, steadiness of the hand, rapidity of motion in a tapping test, and card sorting. All of these tests were given to each group at each of the five annual examinations. The mental tests given differed somewhat from year to year. Tests such as cancellation, substitution, memory for digits, completions, opposites, various puzzle tests, the Yerkes point scale, and many others were used as mental measurements. Norms for these tests were given in percentile rank for each age level for the two groups combined, and comparisons are drawn between the two groups for each of these measures of both mental and physical traits. Obviously, there would be a large number of comparisons. The book contains 685 tables, when the measurements of both groups are combined.

The physical measurements showed that the school group is superior to the working group in every trait at every age. The superiority is greater for boys than it is for girls, and greater at ages fourteen, fifteen, and sixteen, than it is at ages seventeen and eighteen. In mental ability, the superiority of the school group is even more marked than it is in physical traits. The change of difference, however, is the reverse; in physical traits, the tendency is for the difference to decrease with age; in mental traits, the tendency is for it to increase. One factor that causes this increase of difference in mental traits is the greater elimination of the inferior in the school group.

In addition to the comparison of the two groups in these various mental and physical traits, the author also gives a careful statistical analysis of the mental and physical growth of children from fourteen to eighteen years. Other points considered are sex differences; the relation of mental and physical ability to school grade completed during the first four years of industry; the relation of mental rating to physical ratings; industrial histories; industrial life in relation to ratings in mental and physical tests; and the social status and home conditions of the families of working and school children. A final chapter gives a lucid interpretation of the findings.

The mental measurements that were used were the best, perhaps, that were available fifteen years ago when the investigation was begun. Quite a different battery, or several of these combined into one test, would probably be used if a similar investigation were begun to-day. A great amount of time and energy would be saved, with more reliable results. The statistical procedure, as the author realizes, could be more refined; conclusions based upon the difference between two measures are frequently drawn without any knowledge of the reliability of the difference. This fact leaves such conclusions open to criticism.

The book throughout presents all the evidence of a scientific investigation. It is a good second to the *Genetic Studies of Genius*.¹ It adds a great deal to our knowledge not only of those boys and girls who remain in school and those who go into industry, but of child psychology in general, and especially the psychology of the adolescent child. The vast number of measurements have been well organized. The numerous tables are well arranged and clearly explained. The book should be valuable to clinical psychologists, to those who are giving courses in the psychology of adolescence, and to all those who are interested in the conditions that surround childhood.

Perhaps the most important outcome of this book was not the large amount of data accumulated on these children, but the development of

¹ By Terman *et al.* Stanford: Stanford University Press, 1925.

the child-guidance clinic in connection with the public-school system. At first the work was financed entirely by private funds, the school board providing the quarters in which to carry it on. Later, however, when the school board, through their superintendent, began to realize the extent to which the information gathered by the bureau could be made use of in educational and vocational guidance, they gave financial assistance. The growing interest in problems of behavior led, in 1919, to the transfer of the juvenile court's psychological work to the bureau, so that these cases might be dealt with as educational problems rather than court cases.

Finally, so many of the activities of the attendance department dealt with children who needed the bureau's service that it took over this work also. Thus out of what was at first only an attempt at research there developed an important agency for dealing scientifically with behavior problems in the community.

ANDREW W. BROWN.

Institute for Juvenile Research, Chicago.

THE UNEVENNESS OF THE ABILITIES OF DULL AND OF BRIGHT CHILDREN.

By Andrew W. Brown. (Teachers College Contributions to Education, No. 220.) New York: Teachers College, Columbia University, 1926. 112 p.

The questions that the author sets out to answer in this study include the following: "Are children at all levels of intelligence equally uneven in their abilities? Is the unevenness of bright children greater than, equal to, or less than the unevenness of the abilities of dull children?" The investigator is interested in collecting data on these points because of (1) the more or less prevalent belief that the dull or mentally deficient child is more uneven in his abilities than the bright child, and (2) because of the significance for educational methods and instruction of greater or less specialization within any of these groups.

In his designation of the various kinds of ability, Brown uses Thorndike's classification of man's total abilities under the three heads of abstract, mechanical, and social ability. To these, he adds a fourth—the ability to deal with abstractions without dependence upon the medium of spoken or written language. Since no satisfactory tests are available for the measurement of social ability, this has been eliminated from consideration. The three kinds of ability studied are, then: (1) abstract ability, the ability measured by the usual intelligence test; (2) non-verbal or non-language ability, which is measured by tests where "no knowledge of word concepts or language symbolism is a prerequisite for doing the test"; and (3) mechanical

ability—i.e., ability to meet concrete situations. The Haggerty intelligence examination, Delta 2, is used as a measure of abstract ability, the Pintner non-language mental test as a measure of non-verbal ability, and the Stenquist mechanical aptitude and assembly tests as measures of mechanical ability. The study is confined to a relatively unselected group of boys of ages ten to thirteen, inclusive. A slight selection was necessary in order to avoid cases that might have a language handicap because of foreign parentage. Girls were eliminated because the Stenquist test was standardized on boys and no satisfactory substitute test is available. The age-groups specified were chosen because of the limitation within this range of the applicability of some of the tests used. The size of the age-groups varies from 93 for eleven-year-olds to 129 for thirteen-year-olds, a total of 450 cases.

Exhaustive statistical treatment and graphical presentation of results make up a large part of the study. Correlations between the various abilities for the total group studied and for the single age-groups have been computed and corrected for attenuation and for the differences in variability of the separate age-groups. The mean correlation for all ages has been taken as representative of the relationships found. These final correlations indicate that all these abilities are positively related, but that the correspondence is only moderate or low. It is interesting to note that the degree of these relationships is in agreement with the theoretical expectations—i.e., the abstract and non-verbal abilities have the highest correlation ($r = .51$) and the abstract and mechanical assembly have the lowest ($r = .24$). A conclusion for this part of the study is that, in view of these low correlations, the definition of general intelligence should be broadened to include a properly weighted measure of all these abilities, and any other abilities that are found to have similar low predictive values, one with the other, rather than abstract ability alone.

The selection of the two groups to be compared has been made on the basis of the distribution of the raw scores in the various tests. The upper quartile has been arbitrarily designated as "bright", the lower quartile as "dull". While this classification is true relatively, all the children in these groups would not necessarily fall under these captions if rated on the basis of their I.Q.'s. This is principally true of some of the children in the dull group. Raw scores for the different tests and different levels have been made comparable by transmuting them into modified T-scores. A departure from the usual method of scaling is the use of the combined age-groups instead of a single age-group. The difference between the mean of the total group for each trait and the mean of the dull group in that trait has

been expressed in a ratio. The difference between this ratio and the corresponding ratio for the bright group was taken as a measure of unevenness. In the comparison of abstract with non-verbal ability and of abstract with both kinds of mechanical ability, the unevenness was found to be practically the same for the two groups. In the comparisons for separate age levels, no consistent tendency was found for the differences between the abilities of the two groups to decrease or increase with age. While the above conclusions hold for the groups, there are numerous instances of individual unevenness in both groups, differing both in kind and degree of unevenness.

This is a carefully worked out study. The author is alert to the limitations of his findings and interpretations. His results bear out the conclusions of others that cases of extreme unevenness in abilities, especially in the lower ranges of intelligence, are exceptional, or that claims made in regard to them have been unwarranted because of insufficient analysis and inadequate interpretation. The implication for educators and workers in the clinical field is that every child presents a unique situation and may be a "specialist" of a sort. His case can be dealt with adequately only after detailed study of his distinctive aptitudes and characteristics.

ROSE G. ANDERSON.

Minneapolis Child Guidance Clinic.

THE PROBLEM CHILD. By A. S. Neill. New York: Robert M. McBride and Company, 1927. 256 p.

This book is based on the experience and philosophy of an English educator who became interested in child psychology and devoted more and more time to the problem child and to the development of the free-school idea on the continent. His whole philosophy of education is that a child must be given a free hand to develop his own ideals and interests; suggestion and persuasion are tabooed as the unfair tools of adults to force things on children, and he has tried to eliminate them from his curriculum. His fundamental thesis is that "no man is good enough to tell another how to live". Attempting to do this creates the unhappy child, and a problem child is always an unhappy child fighting against the superimposed standards which adults feel are essential for their well-being.

To carry out this idea of freedom, he eliminates the teaching of politics, religion, and the system of morals and ethics handed down from previous generations. Conscience, in his opinion, is the cause of stealing, neurotic behavior, masturbation. The reformer is always preaching against his own strivings. Higher motives are denied in all attempts to put over moral reform; they always are motivated by

the same abnormal strivings within the individual. Grant freedom to children, stop teaching religion and morals and manners, and you remove complexes and a race of people will grow who are happy and free.

Throughout the book, especially in the first few chapters, organized religion comes in for severe condemnation. The doctrine of original sin, which he holds forms the basis of all religions, moral taboos on sex, and moral education are annihilated in turn. The most neurotic children are those who have had religious upbringing. In such children sex has been given an exaggerated importance. Religion to a child simply means fear. It teaches them to hate the flesh and to love the spirit.

The book is an interesting mixture of good sense, personal prejudice, and many sweeping, dogmatic statements. The author combines a discussion of the problem child with his own philosophy of life. It is quite different from any other book that has been written on the subject, and many will get a new point of view about child training and education from it. It is a book written by an enthusiast, and such books lack balance. The existing order and all previous methods of child training, particularly those related to the development of ideals in children, are thrown over. A utopian concept of freedom is substituted, and the child is left to the trial-and-error method of developing.

The discussion of case material frequently smacks of the miraculous. A child stops tormenting a dog when he is simply asked what the dog's name is; the question makes the child realize that it is his brother that he is really tormenting. Another child reveals stolen goods and stops all stealing when told that babies grow inside the mother. One could find support here for a common lay belief that the function of a psychiatrist is to press buttons, release hidden complexes, and suddenly create a different person.

The book certainly makes very interesting reading and contains a great deal that is of value. The author discusses fears, jealousies, rewards and punishments, the shortcomings of parents and teachers, religion, sex education, unhappy marriages, and freedom. He has missed very few aspects of our modern life with his cryptic darts. He has freely illustrated the book with examples from his own experience with problem children. For a selected group of parents, the book can be recommended as a useful addition to their reading list. It would provide many topics for disagreement and might thus be a stimulating book for certain groups who enjoy arguments and can profit by them.

FREDERICK H. ALLEN.

Philadelphia Child Guidance Clinic.

THE PSYCHOLOGY OF MURDER: A STUDY IN CRIMINAL PSYCHOLOGY.

By Andreas Bjerre. Translated from the Swedish by E. Classen.

New York and London: Longmans, Green and Company, 1927.

164 p.

It may be well in starting to point out that the author is not the psychiatrist, Poul Bjerre, since American readers might confuse the two and imagine this book to be by the same Bjerre who wrote *The History and Practice of Psychoanalysis*. The present author, who died in 1925, had been professor of criminal law at the University of Dorpat and later occupied the chair of legal philosophy. He spent many years studying criminals in jail and obtaining first-hand information with regard to them.

This volume consists of personal studies of murderers, giving in detail the life of each and tracing out the final evolution of the personality and the mechanism of the crime. The author has spent an enormous amount of time in observing and interviewing the cases described. The book is made up of an introduction, which describes in detail the author's method of study and some of his conclusions, and three chapters, each dealing with a particular type of murderer.

The author starts out with the statement that "the determining factor of all crime is *weakness*". The habitual criminal lacks the capacity for making a satisfactory adjustment to life. Among murderers there are three ways of dealing with this inferiority: (1) by self-deception, (2) by renunciation, and (3) by shamming.

In studying his cases, the author is struck by the fact that "the average criminal suffers from prematurely arrested development and thus really resembles a child or a primitive creature in unconsciously assuming that all human beings look out upon life in the same way that they do". Accordingly, whenever the criminal assumes that a certain attitude of mind or a certain type of behavior is universal, it really means that this is the criminal's own attitude of mind or method of behavior. With this clue, the author feels that he has managed to work out the inner psychic life of the murderer.

The three chapters discuss three types of murderers and each chapter gives a careful study of a case to illustrate and prove the author's views. Several conclusions of the author's seem worth mentioning.

He holds that the sex instinct never plays more than a secondary part in crime, even in such crimes as rape, because "there are always deeper seated defects of different origin which in the last resort have played the determining rôle".

A special attachment to the mother is commonly found, but this only indicates the psychic inferiority of the criminal and shows that

his development has been arrested at the childish level. It is not a sexual relationship.

Remorse is not due to the pangs of conscience over a single act in the past; it is "essentially the fear of new mistakes, errors, sins or crimes . . ." The remorse of the murderer never produces a regeneration of character. "Remorse in the ethical sense is practically never found among the graver criminals."

One might continue with the author's views on confession, religion, and so forth, which are well worth considering, but the reviewer will close with the statement that the book forms an important contribution to the psychology of crime and that the author's views are presented in an original and entertaining manner. The book is well worth reading by psychiatrists, psychologists, or lay readers.

KARL M. BOWMAN.

Boston Psychopathic Hospital.

THE NATURAL INCREASE OF MANKIND. By J. Shirley Sweeney, M.D.
With an Introduction by William H. Welch, M.D. Baltimore:
The Williams and Wilkins Company, 1926. 185 p.

The population problem continues to occupy a prominent place on the economic and social stage. Is the world becoming over-populated? Does the decline in birth rates indicate a lessening of the virility of the race? Is the proportion of the unfit in the whole population increasing? Is birth control to be regarded favorably or unfavorably? These and many other questions are being continually discussed and new data relating thereto are eagerly sought. Dr. Sweeney's intensive study presented under the above title is, therefore, timely and should attract wide attention.

As the measure of increase of population the author uses the vital index ($100 \times \text{births} - \text{deaths}$). He has worked out this index for all of the countries of the world for which data are available and has presented the results in comparative tables. He has also worked out mean indices and the trends of vital indices in various countries.

After presenting the data with full explanations, the author draws the following significant conclusions:

Practically all countries possess high mean indices. This means that all the races of the world are increasing in numbers and are biologically healthy.

Some populations possess higher mean vital indices than others. The northern European races, the Australian states, Canada, and the United States rank especially high. They are, therefore, considered biologically healthier than other peoples, and are destined to become contenders in the race for peopling the earth's surface.

The vital index seems to depend to some extent on geographical location, the countries near the equator having lower indices than those farther north or south.

Vital indices in most countries were found to be increasing.

War and disease do not seriously affect vital indices. Their effect is merely temporary.

The question of over-population is discussed at length, and the author draws the following rather startling conclusion:

"It is our belief that there is only one way that nations can avoid the consequences of relative over-population. That is by an international agreement to control numbers by a league of stationary populations. Will it ever become a reality? No one can deny that it is possible. We say to parents: 'Your children must not work', and, 'Your children must go to school'. Would it be inconceivably absurd to say to them: 'You are at liberty to rear only three or four children' (depending upon the size of the population, mortality forces, etc.)?"

Dr. Sweeney has no solution to offer relative to the qualitative aspect of the population. He hopes, however, that progress in human selection may be made in the future.

The book as a whole is interesting reading and a real contribution to our knowledge of the biological status of the populations of the world.

HORATIO M. POLLOCK.

New York State Department of Mental Hygiene.

WHAT HAVE YOU GOT TO GIVE? By Angelo Patri. Garden City, New York: Doubleday, Page and Company, 1926. 193 p.

What Have You Got to Give? is like a pleasant afternoon chat with a man interested in the workings of his fellow humans' minds and emotions, tolerant of their doings if only he can discern the mainspring of their actions. Less preachy than its title suggests, it is proving thoroughly enjoyable to "the schoolmaster's" large body of followers. Like other writings of this popular newspaper-syndicate writer, the present collection of essays plays about on the fringe of the scientific study of human conduct, chancing at times to fall in line with the teachings of science, oftener mirroring personal sympathies and antipathies without regard for the findings of unbiased students of man's behavior, yet always catching the half-hearted seeker after facts by its easy portrayal of plainly marked finger posts on the sketchily mapped trail to a well-rounded development.

It is a question whether such a happy dalliance on the outskirts of science helps or hinders the establishment of open-mindedness as a habit. Startling some into a revaluation of their pet dogmatisms and

leading them to shake off old prejudices in looking at their own and other people's activities, this broadcasting of the meditations of common sense bogs many who with a little prodding would make the grade of unsatisfied hunting for causal knowledge, and cumbers them with a new set of prejudices which they take as sifted facts. Too quickly rewarded with untested announcements of the definite sort that human nature craves, these good beginners in the journey toward a bowing acquaintance with the science of human conduct stop before they are well on their way, believing that they have gained insight into matters that puzzle closer observers.

Chapel Hill, North Carolina.

GLADYS HOAGLAND GROVES.

YOUR NERVOUS CHILD. By Erwin Wexberg. Authorized translation by Walter Béran Wolfe. New York: Boni and Liveright, 1927. 178 p.

Wexberg, who is one of Dr. Adler's most faithful pupils, tries to explain child psychology along the lines of his teacher's "individual psychology". He therefore stresses the importance of the lack of self-confidence and the feeling of inferiority that result from organic inferiority, and explains the child's development as a reaction of his inferiority to his environment.

The most interesting part of the book is probably the chapter on family constellation, where the author considers the child from the point of view of his situation in the family. Thus he shows the dangers that threaten the only child, the fatherless boy, the youngest child, the middle child of three.

He stresses the importance of correct education. He criticizes our present education and attempts to give a constructive outline, considering the nervous child as far more of a pedagogical than a medical problem. He is against "overtender" education or that "by authority". The task of education is to help a child to become an independent and courageous person who is willing to work.

The little book is an interesting statement of Dr. Adler's school. One feature, lack of self-confidence, is pointed out, but unfortunately insufficient attention is paid to the reaction and development of the personality as a whole.

OSKAR DIETHELM.

Johns Hopkins Hospital.

AN AMERICAN SAGA. By Carl Christian Jensen. Boston: Little Brown and Company, 1927. 219 p.

One agrees with others who have written of this book that it belongs with the stories of Carl Schurz, Jacob Riis, Edward Bok, Mary

Antin, Ludwig Lewisohn, Michael Pupin, and others, in a list of Americanization stories. But it is more than an "Americanization" story. It is a story of a Dane who, as the pages run on, becomes "Americanized", but, more important than that, becomes aware of himself as a human being. This "humanization" transcends "Americanization", as many most enthusiastic Americans, or patriots of any country for that matter, do not always accomplish the larger step. The topical material of the story, with change of date and place, is common to many—life as a small boy in Denmark, adolescence at sea, the struggle to understand and adapt himself to life in New York City, marriage, teaching in a Doomsday college, studying at the University of Minnesota, serving as a social worker in New York City. The significant thing is what Jensen has done with this material—first in his life, then in his book. All of us live through somewhat similar periods, but few at the end, and still fewer before the middle, have much worth saying as to the experience, the relation between events and living having been more or less casual. But for Jensen the relationship has not been casual. He has lived in and through these events, and each has brought him closer to an understanding of himself and of what transcends both himself and the event. Told in the terms of daily events—learning to loaf on a contract job as a plumber's helper, obtaining bread as a student for himself, wife, and small son from the Salvation Army, overcoats from the city morgue, sociology and economics from the university—it is in reality a story of spiritual growth, of which these things were merely the material. The story is beautifully told in a prose that frequently reminds one of H. M. Tomlinson or C. E. Montague. One is tempted to quote many right phrases, but chooses "the tuning fork of my feelings", which will be especially appreciated by those who observe the hourly emotional play between patients or clients and elements in their environment.

As happened in Lewisohn's *Upstream*, and as is always likely to happen, the older experiences discussed in the first two-thirds of the book, because better synthesized and assimilated, are better discussed. The material of the last third of the book is too recent to be worked well into the pattern of significances. Some readers of MENTAL HYGIENE will recall Jensen as a student at the New School for Social Research and the New York School of Social Work. Others will remember him as a member of the staff of the Texas Mental Hygiene Survey of The National Committee for Mental Hygiene.

FRANKWOOD E. WILLIAMS.

The National Committee for Mental Hygiene.

HEALTH BEHAVIOR. By Thomas D. Wood and Marion Olive Lerrigo. Bloomington, Ill.: Public School Publishing Company, 1927. 150 p.

This book, in the words of the authors, "is an attempt to express for various age groups appropriate behavior in terms of habits or skills, attitudes and knowledge showing stages of educational progress". It comprises a few introductory pages and some 125 pages of scales. The book is designed for use by teachers, supervisors, and any others who may be teaching, planning, or administering programs of health education.

Its introductory pages are devoted to a consideration of the scope of ideal health education in children and their parents. The authors' position in asserting that much of the responsibility for health education in both child and parents should be shouldered by the school, is well taken. In general their ideals for physical achievement are rational and conservative, although individual opinions must differ from theirs in many details.

The authors are to be congratulated in that they have included in their scales mental and social as well as physical health.

It is encouraging to note how important a part in their plan is given to the education of parents, as lack of opportunity for parents to learn the truth has been one of the grave omissions in our educational system up to the present time.

In the introduction considerable space is devoted to the desirability of education by teachers in health matters. To a certain extent this is good and desirable, yet it is easy to see how a program of health education, if enthusiastically entered into by all teachers, might make a great bugaboo of health propaganda, and might produce innumerable phobias in children. I do not think that the rank and file of our teachers can be expected to appreciate the intricacies of healthy living well enough to attempt to teach it unless specifically instructed as to the lessons to be given. On the purely physical side, if a conservative and practical list of ideal achievements could ever be devised, teachers might be able to teach these to parents and children. I wonder if our ideas of social and mental health are well enough formulated to enable us to trust this education to all teachers. I doubt the ability of the average teacher, with her multiform duties, to teach this difficult subject, and a few mistakes can do much harm.

In the matter of knowledge about infectious diseases and accidents, undoubtedly some instruction should be given to children, but there is in this a real danger of producing phobias. A seven-year-old girl who had just stepped upon a rusty nail came crying into my office one day. I said, "Don't worry. This won't hurt so much." She jerked

out between sobs that the pain didn't bother her at all, that she "was afraid she would get an infection". I am glad that the responsibility for her health education was not upon my shoulders. Health education should be carefully supervised and relegated only to specially instructed teachers.

To criticize the details of the scales themselves would introduce a fruitless discussion of minor details. The authors have entered into their work with great thoroughness and undoubtedly know more about the expected rate of progress in children than do I.

I wish, however, that they had put more emphasis upon the purpose of these scales. For their object—namely, to serve as a means by which principals and superintendents may check up on the relative health achievements of their groups of children—the scales will undoubtedly be of great value, but I am afraid that some of our health workers will attempt to apply them to individual children or to groups of children, trying to make them conform to these scales. I can see in such an effort possibilities for untold harm and a distinct backward step in our attempt to attain mental health. If such use of the scales were made, we should have to try to standardize children, to make large numbers of them conform to innumerable trivial, though in themselves beneficial, rules. Nothing could be more irksome to the child. For instance, in the scale for the kindergarten child, under physical health alone there are no less than 69 habits and skills noted, besides 22 attitudes to be acquired and 32 subjects the child is supposed to know.

Why would it not, even for the purpose desired, be more practical to select a few really important achievements which would embrace, even if imperfectly, many of these minor points? For instance, in the authors' first subdivision under physical health, the subject of eating habits is considered. The kindergarten child is supposed to develop 11 habits relative to meals. He shall eat what is put before him, must drink one quart of milk daily and several glasses of water, and so on, including manners. Would it not be more simple and practical to specify that the child should develop a good, healthy appetite and let the minor details take care of themselves?

Again, the third-grade child has no less than 17 do's and don'ts listed about his meals. This same child is "to use moderation in running and jumping". Why? He also is "to enjoy having his hair neat"! He is "to enjoy using a well-modulated voice"! Instinctively I recoil from such a child; he doesn't sound natural.

I consider this work one of considerable technical value, and I believe that the entire subject of health education is one of extreme importance. It should, however, be handled with exquisite care. Too

many "scientific facts" of doubtful veracity are already being broadcast by enthusiastic agencies. Many of these may later have to be retracted. Such retractions do no good to the cause of health education.

This book, then, which for the purpose for which it is written is of decided value, should have its use restricted rigidly to that end. As a measure of individual or group attainment it is useful; as a guide to attainment by individual children it might prove unfortunate.

C. ANDERSON ALDRICH.

Children's Memorial Hospital, Chicago.

SOCIAL ADJUSTMENT. By Robert Cloutman Dexter. New York and London: Alfred A. Knopf, 1927. 424 p.

Here is a book treating of the familiar group of social problems by a former social-work executive, now become a professor of social and political science. It is the social worker, rather than the professor, who speaks. The presentation is descriptive and practical, rather than theoretical. It approaches the question of social adjustment, not so much from the standpoint of general sociology or of social or individual psychology as from that of the concrete social exigencies presented by each of the specific maladjustments discussed and the particular measures of social control that appear to have met the practical test.

The book may be regarded as dealing in a sense with social art, rather than social science, but in the absence of any generally accepted synthesis of society by means of which all social problems may be resolved into common factors, this practical approach is one that seems to the reviewer, for the present, at least, both the most helpful and the most scientific. To face the reality of human problems for ten years in social work, and to follow that with extensive reading and study and the formulation of one's views in teaching, as Dr. Dexter has done, constitutes an admirable background for a fruitful discussion of social problems. Dr. Dexter presents nothing that is new to one who keeps abreast of current thought and practice; he does not pretend or attempt to do this. But he does present in well-organized fashion a discerning and informing summary of the views held and the procedure followed or recommended by the generally recognized leaders in the various fields of social practice that he discusses. A certain facility for epigrammatical expression on the author's part adds to the general readability of the book.

One is impressed with the comprehensiveness of the volume. With a broad sweep, it touches the high spots of a great array of social maladjustments, arising from poverty, thwarted childhood, mental

deficiency, mental disease, physical illness and handicaps, drug addiction, sex and the family, crime and punishment, and immigration. In addition to discussing social pathology, Dr. Dexter gives a careful review and estimate of constructive efforts to deal with each of these problems, and devotes special chapters to certain of the outstanding organized movements for social betterment, such as modern child-welfare work, modern public-health work, social case-work, and community organization. He has apparently consulted an unusually large number of sources, and the bibliography that he has compiled is most valuable in itself.

It is almost inevitable, in a volume with such a broad range, that there should be statements that the reviewer might wish to challenge. There runs through the entire book a strong emphasis on the potency of heredity and its rôle as the leading cause of social maladjustments. Many of these statements with regard to heredity are of the final, dogmatic sort that were in vogue ten years or so ago, but that have been considerably modified, even by those who were their chief proponents at that time. In the chapter on the causes of poverty, we read, for example: "In recent years, the emphasis on inheritance has become increasingly pronounced, and in no field has the potency of heredity been more strikingly proved than in the inheritance of mental traits." And again in the same chapter: "Careful statistical studies have been made of the inheritance, not only of mental defect, but also of general intelligence and of selected mental traits, and these studies seem to prove *beyond a shadow of doubt* that mental qualities of all kinds are inherited." (Italics are the reviewer's.)

Dr. Myerson's book, *The Inheritance of Mental Diseases*, is included in Dr. Dexter's bibliography, but it would seem from the above that Dr. Dexter does not share with Dr. Myerson, and other students of the inheritance of mental traits, their scientific skepticism, based on our almost total ignorance of the fact or manner of the inheritance of mental diseases, defects, and characteristics.

In his chapters on the feeble-minded and on the mentally diseased, on the other hand, Dr. Dexter, doubtless owing to the fact that his sources of information on these chapters presented more recent views on heredity, recognizes that there are important causes of mental disease and mental defect other than heredity, and that the best authorities are, for the most part, ignorant as to the rôle that heredity may or may not play. One finds, however, in the chapter on feeble-mindedness, a few of the unsubstantiated generalizations formerly current, such as the following: "Most serious of all, the moron not only appears normal, but he has the ordinary human physique and passions unchecked by self-control. As a result, if a male, he leaves

behind him a large progeny, and if a female, either does the same or becomes promiscuous and diseased, and thus a spreader of moral and physical contagion."

On the whole, the author's treatment of mental deficiency and mental disease, so far as these vast subjects can be presented in a popular way within the space of a few pages, is quite satisfactory.

To the writer, one of the best chapters of the book, as presenting an account of modern constructive social movements, is that on health and society. It is to be regretted that one of the most promising of organized attempts at social adjustment during the last five years—the child-guidance movement under mental-hygiene auspices—has not received special attention in this volume.

Altogether, the book is to be commended as an enlightening discussion of social problems in terms of the most modern points of view in the various fields. If it can reach the group for whom Dr. Dexter particularly intended it—community leaders, such as statesmen, physicians, lawyers, teachers, captains of industry, and philanthropists—it should serve a most useful educational purpose.

STANLEY P. DAVIES.

State Charities Aid Association, New York City.

MODERN PARENTHOOD. (Proceedings of the Southern California Conference on Modern Parenthood.) Los Angeles: Southern California Society for Mental Hygiene, 1927. 312 p.

This little paper-covered volume, which is similar to the proceedings recently published of child-study and parent-education conferences in New York and Chicago, represents the efforts of the leaders in mental hygiene, progressive education, and child study to reach the parents of California.

It contains many more papers than appeared in the New York report and papers of much less even merit. Some of them are obviously printed from stenographic notes just as they were delivered. These naturally leave much to be desired in the way of style and condensation. The book would have profited by more careful weeding out of poorly written material. As it is, there are too many articles with too much overlapping to hold the interest of the average reader through the entire series.

There is a practical, helpful discussion of habit formation in babyhood, by Jessie C. Fenton, which is perhaps a little too simple and mechanical to convince the mental hygienist who recognizes emotions as fundamental, but this is counterbalanced by Mrs. Arnold Gesell's very human and appealing presentation of emotions and mental life.

A number of papers—such as *The Nursery School Idea*, by Dr.

Elizabeth Woods, Dr. Bird T. Baldwin's report on the work of the Child Welfare Research Station of the University of Iowa, and the description of parent study groups in America by Mrs. Howard Gans—are largely informational.

Miriam Van Waters, in her usual epigrammatic style, writes about the family in search of a goal; while Ernest Groves has two papers, one on the drifting home, one on social conditions that influence youth.

Mental hygiene is represented by Dr. Van Norman Emery's paper, *Revising Our Attitude Toward Sex*, Dr. Frankwood Williams' paper, *The New Freedom*, and Dr. Aaron J. Rosanoff's discussion of the development of temperament, which, rather surprisingly, is chiefly concerned with the older classificatory static conceptions, which afford so little practical help to parents. Two of the most vital, well-written papers in the book are *Creative Education*, by Edward Yeoman, Director of the Ojai Valley School, California, and *Art in the Life of the Child*, by Mrs. Florence Cane of the Walden School, New York, which, between them, could give any parent a conception of the spirit of progressive education and what it means for the mental health of children.

On the whole, a book like this is justified not as a scientific or literary contribution, but as a convenient compilation of pamphlet literature, containing considerable chaff, but also much useful information and some points of view for the enlightenment of struggling parents.

JESSIE TAFT.

Child Study Department, Children's Aid Society of Pennsylvania.

A MANUAL OF NORMAL PHYSICAL SIGNS. By Wyndham B. Blanton, M.D. St. Louis: The C. V. Mosby Company, 1926. 215 p.

This is called "a brief compilation of normal findings in the healthy individual" and is a very carefully worked out schedule. The author is facile in compressing much information into a few words; for instance, the kidneys are "two bean-shaped glands, deep lying and retroperitoneal". A few well chosen references are given after many of the chapters.

We are especially interested in the section on mental examination. The book does well to announce that "mental behavior is capable of analysis". The outline of mental examination takes a little over one page, almost exactly the same space as that given to rectal examination; 89 words suffice whereas the other section contains 137.

This handbook, valuable as it is, will be still more useful when a later edition presents mental examination somewhat more in detail.

The general practitioner, and even the medical student, is continually confronted by conditions in which the state of mind plays an important part. Early in his medical education he should be taught to recognize mental symptoms, and a book of this sort can be of very great assistance to him in this field.

SAMUEL W. HAMILTON.

Bloomington Hospital.

THE SUICIDE PROBLEM IN THE UNITED STATES. By Adolph Dominic Frenay. Boston: Richard G. Badger, 1927. 200 p.

This is essentially a statistical study of suicide; there is but slight attempt at a psychological and sociological analysis. The result, therefore, is a contribution, primarily, to demography. In this the author adheres closely to the orthodox approach. The introductory chapter describes the field and the method of analysis. This is followed by a discussion of suicide, and its incidence is compared with other causes of death. The course of the suicide toll is then followed over varying periods of time, not only for the United States and many of its cities, but for most of the European nations and a scattering of others, as Japan, Australia, and Mexico. The rates in the United States are then further analyzed by race, degree of urbanization, age, sex, mental status, occupation, and by method of committing suicide. The concluding chapters take up, with some detail, the relation of suicide to the weather, to the nationalistic make-up of the population, and finally to religion.

The results are not novel. The outstanding findings are as follows: As a cause of death, suicide in 1922 ranked sixteenth on the abridged list of causes of death, with a rate of 11.9 per 100,000 population. It was exceeded by such diseases as heart disease, tuberculosis of the respiratory system, cancer, and pneumonia. As compared with the middle of the past century, the suicide rate appears to have increased, but recently the rates have shown a declining trend. There seems to be a tendency for suicides to decrease during war, but to increase after war. The United States occupies a mid-position compared with European nations. Among the latter, the high rates are found in central, western, and northern Europe, the low ones in the east and south. In the United States the northeastern and central states have moderate rates, the southern states low rates, and the western states high rates. The curves for city and country show similar trends—that is, as one increases, the other increases—though the urban rate exceeds the rural rate. The rate for the colored population is lower than that for the white; the male rate exceeds the female rate at every age except the period from 15 to 19; single people show higher

rates than married people. Years of commercial panics and depressions do not show constant relations to the suicide rate. As to means of suicide, firearms appear most frequently; suicide by hanging occupies second place. The correlation between climate and suicide is not significant. The most significant relation appears to be that with religion, Catholics showing consistently lower rates.

As a study pursued by statistical methods, the book merits criticism. The text shows an almost complete absence of tabulation. Historical data, instead of being summarized in table and chart, are described at length from year to year. Two difficulties result from such treatment. In the first place, the reader must experience trouble in following such data, as no long-term trends are isolated, and secondly, slight annual changes, which in themselves may be of no significance, are overemphasized. Closely associated with this is the failure to recognize the possible influence of secular trend on correlations. For example, the suicide rate in 95 cities is correlated with that for the United States registration area over a period of 21 years, and a correlation coefficient of $+0.98$ is obtained. This is treated as if it were a coefficient of zero order. In reality, each of the two sets of rates was correlated with time. Consequently their true correlation would be one in which the correlation with time was held constant by the method of partial correlation. The same result might be obtained by correlating the two series after each had been corrected for secular trend. Many of the correlations quoted in the text suffer from this methodological oversight.

On page 12 the author writes: "Rates must not be confounded with percentages or proportions. Under the proportion we understand the numerical relationship which exists between the value of the two items. For instance, the proportion of white to colored is 3 to 1." It should not be necessary to point out that a percentage is a rate, though it is not a proportion, and that, furthermore, a proportion must consist of four terms. The following would hardly be considered an adequate explanation of weighting: "A state or city with several hundred thousand inhabitants certainly weighs two, three, four times as much as another state or city with only one hundred thousand inhabitants." (Page 12.) Nor would this description of correlation be considered entirely accurate: "Provided that the legend or stub (the first column) remains the same, two columns of a statistical table (though they are measures of different types—*e.g.*, one measure may be expressed as a percentage, the other as a rate) may exercise upon each other a certain influence. With an increase of the figures of one column, we may have a rise or fall of the number of the others." The author wishes to show the necessity of relative in lieu of absolute

figures. But his description is not a happy one: "The smaller the population, the higher the rate, whereas if the population is greater, the rate will necessarily be lower when the absolute numbers are the same in both cases." On page 15 he writes: "If we compare the number of deaths by suicide with the number of deaths by all other causes, we find that approximately 1 man out of 100 kills himself." Clearly what is intended, however, is that of every 100 deaths, 1 results from suicide.

As examples of the interpretation of small differences, let us take the following: The suicide rate by firearms in cities of the registration area was 4.6; in the rural sections it was 4.2. "Hence firearms as a means of self-destruction are employed more frequently in rural parts of the country than in the cities." (Page 66.) Assuming the inversion to be a printer's error, the question still remains, is the difference due to random fluctuations in the rates, or to significant changes? A somewhat similar example is shown on page 74. The suicide rate in California in 1915, uncorrected for sex distribution, was 33.2. Corrected for sex, it became 31.6. The difference—1.6—is said to be too small to effect a real change in the suicide rate. Or turn to page 49: "The white population of the city of New York has a suicide rate which is only nine decimals (sic!) higher than that of the state." Obviously the significance of such differences can be determined only in the light of the probable errors of the rates.

On page 43 we are told that the suicide rate for the colored population in the United States was 9.8 in 1910 and 3.7 in 1920. This means "when one hundred colored killed themselves, 60.5 did so in 1910, while only 33.9 did so in 1920". It would be interesting to learn the arithmetical procedure by which this result was accomplished.

One more word on a point not, however, connected with statistics. A section is devoted to the discussion of suicide rates among Indians; this part of the text is really ethnographical instead of demographical. On page 153 we find the following statement: "The Creeks kill themselves after the slightest disappointment." The authority for this statement is given as *Lombroso, L'homme de linguente*, p. 51, 1884. This is an example of numerous printer's errors in the text; the proper title is *Lombroso, L'uomo delinquente*. Lombroso was not the original authority for the statement; it is questionable, therefore, whether such evidence, twice removed from the original observer, ought to be accepted without corroboration. Should an isolated sentence be taken as characteristic of a group? If so, our contemporary anthropologists will have written in vain, for if they teach one principle of research, it is that a problem of ethnography should

be analyzed, not through scattered observations made on heterogeneous groups, but by a thorough study of one single, homogeneous people.

The last word has not been said on the problem of suicide. John Rice Miner showed how the method of partial and multiple correlation may be used in the solution of many of the purely statistical aspects. Durkheim tried to prove that causation must be sought for, not in individual idiosyncrasies, but in "a collective tendency of society". (*Le Suicide*, Book III, Chapters I and II.) Such an interpretation takes us far from the point of view of individual psychology and psychiatry; but it shows us that further research on suicide, if it is to depart from a purely descriptive attitude and attempt to seek out causative factors, will need to weigh once more the relative effects on behavior of the individual constitution and of society.

BENJAMIN MALZBERG.

New York State Department of Charities.

DREAMS. By Percy Goldthwait Stiles. Cambridge: Harvard University Press, 1927. 80 p.

This is an interesting little book, simply and seriously written. The reviewer was struck, not so much by the author's disagreement as by his agreement with some of Freud's dream theories, despite his statement that his "reaction to Freud was often hostile". The fact that he corroborates some of the fundamentals of the Freudian dream theories is more significant than that he takes issue with them at certain points. For instance, he states, "When we are quite spontaneous, as we seem to be in dreaming, we find that we [human beings] are unexpectedly alike. If it is true, as this discussion tends to show, that dreaming is in many ways like a reversion to childhood, then this likeness is less remarkable. Two adults may appear to have little in common, but they were much more alike in interests and emotions when they were children."

To agree with the author's statement that the dreamer is in a better position to interpret his own dreams than a stranger would belie the facts. Only an exceptional individual could do better at such an interpretation than a more objective stranger. To some extent the author is exceptional in this sense, but only to a limited extent. He shows courage in some of his interpretations, but because of his resistances he fails to make some very obvious interpretations.

The author's observation that the sensory content of dreams is predominantly visual in the form of pictorial representation—called by Freud dramatization—is in full accord with Freud's findings. The sensation of motion ranks next in frequency, and a common phenomenon, which has been stressed by Freud, is that of forming new words

(neologism). "Thus in 1918", the author reports, "the dreamer overheard certain persons volubly discussing this question: 'Is the Gennard approaching or receding?' It was his notion at the time that this was some astronomical event like an occultation or conjunction. Freudian eyes brighten as they detect the root of *Generation* in the otherwise colorless word." The reviewer must confess that although he is a Freudian, he did not react here as a Freudian apparently should. It might not be amiss to mention at this point that while certain symbols are more or less universal, or typical, yet the rule usually followed by well-trained analysts is not to attempt interpretations of dreams from their manifest content; before an interpretation is made, the dreamer must give "free associations" to aid the analyst in arriving at one. In this connection it might be stated that one criticism the reviewer would make of the author's interpretation of his own dreams is that he interprets more or less offhand, without showing the steps by means of which he arrives at the interpretation. Were he to give free associations, much affective material, as evident even in the manifest content of the dream, would be brought to the surface—that is, to consciousness—and the ready interpretation made by the author would need amplification and modification. The use of symbolism and the mechanisms of dramatization and displacement are well illustrated by the author. But no substantial explanation is given for these activities in the dream. Had the author relied upon free associations, he might have found that behind the manifest content of the dream lies the latent content, which necessitates the use of the various mechanisms above mentioned. Symbolism is beautifully illustrated in a "colon" dream in which the large intestine is pictured in disguised form. The author explains the dream on the basis of peristaltic action. True, that may have been the immediate incitement of the dream, but it is to be regretted that the author did not have recourse to free associations for the elucidation of much affective material contained in the dream. No doubt dreams arise from bodily stimuli, as, for instance, from thirst. The author gives one such dream incident of drinking copiously of water and thus satisfying a thirst due to dryness of the throat. Freud mentions such instances and adds the interesting deduction that the dream in this way acts as a wish fulfillment, firstly in satisfying a bodily need and secondly in permitting the dreamer to continue his sleep, since the dream has obviated the necessity of his awakening to quench his thirst. In other dreams of this sort, urination is symbolically presented, but the author fails to go to any depth in their interpretation.

Sex is given a place in dream causation. One purely symbolic

dream is interpreted by the author as a "continence" dream. It would be of interest, however, to know the various steps by means of which the author arrived at this interpretation. The symbolism of church for woman, as interpreted by the author, is very interesting in this connection. Ego activity in the dream—"indulging in vanity", as the author puts it—is well illustrated. The higher ego activities are illustrated by dreams of self-depreciation and self-punishment; envy and ridicule also find room for their activities in dreams.

In commenting on the emotional content of dreams, the author notes as a common occurrence the fact that the emotion accompanying the manifest content—i.e., that recalled by the dreamer on awakening—is out of proportion. Mild emotion may accompany a tragic dream, or vice versa. The author states that "the Freudians are probably right in their explanation of such apparent inconsistencies. The emotion of the dreamer pertains to the deeper current of his thinking to which the dream itself is only indirectly related. . . . It is a matter for regret that we cannot often guess at the concealed motivation." The reviewer would add that it is a matter for regret that the author did not subject the dream to free associations, thus having a better basis for interpretations than can be reached by guessing.

An important attribute accredited by the author to the dream personality is that of being infantile in its egotism. True enough, as far as it goes. But the author contents himself with more or less conscious material, giving no indication that unconscious mental activity is concerned in dream formation.

The reviewer would like to have the author take some of his more recent dreams, and note, either mentally or in writing, all his free associations to the various dream elements, make his interpretations from them, and communicate these results in another interesting book.

ADOLPH STERN.

New York Psychoanalytic Society.

CULTIVATING THE CHILD'S APPETITE. By C. A. Aldrich, M.D. New York: The Macmillan Company, 1927. 127 p.

This book has definite limitations. If these are kept in mind, the ideas set forth can be usefully applied. Its chief limitations are the fact that it deals with a problem of behavior and not with a whole personality, and the fact that a theoretical background has been devised which adds nothing to the practical discussion.

The author very appropriately calls attention to the present tendency to consider only calories and to center attention too much on intake of food without considering the factors that regulate intake,

or without realizing the results of the fear and competition that arise from excessive propaganda on caloric needs. He points to the influence of this propaganda in stirring parents to an emotional attack upon their feeding problems. His attitude toward ideals and standards is sensible, although he objects to a really correct use of the word "normal" rather than to an incorrect interpretation of "normal" as optimum.

The theoretical discussions that cover the first forty-five pages do not help one to understand the succeeding discussion. They would be confusing to the layman, and would be apt to prejudice the critical against the better parts that follow. The hunger-appetite-reflex concept does not add more than a restatement in other words of facts of behavior already known. The use of the term "reflex" here is unsupported. The contrast drawn between hunger and appetite does not consider the fact that they may be different facets of one function. The contrast of hunger as a sensation and appetite as a desire is argued on a word usage rather than on a physiological basis and then is not adhered to, for on pages 29 and 40 the author speaks of "the sensation of appetite". He falls into the error of "neurologizing" behavior by the use of the term "stable nervous system". There are a number of unsupportable statements in the theoretical discussion. While the author claims a statistical basis for his conclusions, he presents percentages without any control data to warrant the deductions. His conclusions seem probable, but certainly cannot be said to be statistically tested. His comparison of absence of appetite to perversions is hard to follow, especially since true perversions of appetite are already well known. He mentions the effect of strong emotion in damping hunger without seeming to realize that this is a corollary of the general effect of strong emotion on sensation. He maligns the child who submits to pressure of feeding without any serious endeavor to discover whether this submission is healthy or not. Perhaps this is because he considers negativism more or less innate. On page 70 he says: "Many of the children . . . literally have no appetite . . . We cannot stimulate anything which is not present." He thus tries to separate appetite from the whole child, not realizing that it is the child that is stimulated and not a disjointed appetite.

Here and there, when he leaves theories and deals with cases, it is evident that in dealing with the appetite he in practice really considers the whole child more than one would suspect. Nevertheless, it is not made clear that lack of appetite and the whole feeding problem are just one phase of a family situation; that otherwise than in eating the child is seriously influenced by parental attitudes and that neither

can the rest of the behavior—*e.g.*, a tantrum—be handled without consideration of the situation behind eating, nor can the eating problem be dealt with alone. ("To develop appetite is an end in itself.") If this is considered a discussion which must be integrated with a whole consideration of the child, its contributions become clearer. As the author himself points out later under negativism, it is inadequate to say, "She wanted more because she knew she could not have it." It is hardly conceivable that any one who has such an interest in feeding as a problem can help seeing identical features in the problem of sleep. However, he evidently is content that retiring to bed should be considered distasteful when he warns that eating should not be put in the same category with it, but should be a "hurrah" event. He fortunately does point out at the end that other behavior problems should be treated, but "later".

GEORGE S. STEVENSON.

The National Committee for Mental Hygiene.

REBUILDING THE CHILD. By Frank Howard Richardson, M.D. New York: G. P. Putnam's Sons, 1927. 313 p.

This book represents the effort of an obviously competent and earnest physician to place before the public a sane point of view on the difficult subject of malnutrition.

His definition of the typical case of malnutrition will shed some light upon the widespread field he covers. "The typical case of malnutrition", he says, "has a pale and pasty complexion . . . has a tired face . . . stands in the fatigue posture . . . like a tired old man . . . is peevish and quarrelsome, with no give and take in his play with other children . . . is a naughty child in school where . . . he does poor work . . . and lacks concentration . . . and is the typical spoiled child at home."

The causes of the liberally defined condition he divides into the following classes: faulty health habits, faulty food habits, family strain, and physical defects. To each of these he devotes a chapter. While the author is to be congratulated upon emphasizing the fact that poor mental hygiene plays a large part in producing this condition, it is to be regretted that he saw fit to devote so little space to the subjects of family strain, school strain, and the psychology of poor eating habits. One feels that he barely skims the surface here and leaves one not quite clear as to the exact rôle these psychologic faults play.

The appetite problem is well handled. Although many will differ from him in minor details, the subject is convincingly put, and it is a great step forward to have a prominent nutrition worker state so

emphatically that malnutrition cannot be cured by forced feeding or by wholesale removal of tonsils.

In his chapter on the cure of malnutrition, however, he insists not only that a child shall be physically and mentally relieved of his symptoms, but that he shall gain enough weight so that he is up to or above the average for his age and height. In view of his definition of malnutrition, I believe this to be an inconsistent attitude. If the child suffering from this condition becomes rosy, active, playful, bright of face, and of upright posture; if he becomes happy and contented in his contacts with other children and adults, so that he is no longer naughty and spoiled; and if he does well in school, why should we haggle over three or four pounds avoirdupois?

The author warmly advocates one-session schools for growing children on the ground that they will thereby be allowed more time for play and rest. In these days of the overworked child, there is much to commend this.

The author emphasizes the importance of proper psychic environment in preventing home friction, which is so prominent a factor in producing fatigue in these children.

Several chapters are devoted to the methods and results of nutrition classes and to special topics such as measured feedings, posture, and the overweight child.

In general this is a constructive and intelligent presentation of a subject difficult to cover in so small a space.

C. ANDERSON ALDRICH.

Children's Memorial Hospital, Chicago.

THE INDIVIDUAL AND THE SOCIAL ORDER: AN INTRODUCTION TO ETHICS AND SOCIAL PHILOSOPHY. By Joseph A. Leighton. New York and London: D. Appleton and Company, 1926. 578 p.

Mental hygiene, sociology, and ethics are three approaches to the goal of life, whatever that may be. There be others, too: science, art, religion. Thinkers and doers have organized their experience around one or another of these as heuristic or therapeutic principles, and have found satisfaction. According to their temperaments, their times, or their theories, they have attempted to force or to lead others to share their way of "salvation". Nowadays, no thinker who attempts to be synthetic can afford to ignore any one of these views of life. He may still work from one of them as nucleus, and his chosen point of reference will, of course, dominate his views; but it is usually with some recognition that others have and will find equal satisfaction in some other of the great organizing principles. A psychiatrist whose successes depend upon his ability to impose upon

his patients some one life pattern or formula with which his own experience is identified will, it seems to me, have a limited range of success; he is essentially a missionary rather than a physician; his cure of souls will be only for the predestined.

In Professor Leighton's textbook, ethical considerations dominate, but he applies them to every field of life. The point of view is liberal, safe-and-sane, normative, at times almost hortatory. A strain of mysticism crops out occasionally. The book is a useful *mélange* of sociology, history, and psychology, without original contribution to any of these fields. It shows wide reading, but, in spots, a lack of the most careful writing.

The author's own scale of values occasionally crops out dogmatically. "Social humanism" turns out to be a combination of these valuations with the familiar views of many modern sociologists.

Leighton leans heavily upon James and Bradley. He goes so far as to say that James's is the only social philosophy that an intelligent man can take seriously. One wonders if James begged questions about any personal hero in any such way.

Those main portions of the book which deal with the history of ethics and with social philosophy or social ethics will not be of great interest to mental-hygienists as such. Yet the reading of such a book might help a certain kind of patient to "see life steadily and see it whole". And the reviewer has known mental-hygienists who needed just such a book to balance their own one-track interpretations of experience. As a sociologist, the reviewer profits by reading an occasional work in ethics.

The historical and critical portions seem competent, but the author's own theories give the impression of having been worked together under pressure rather than thoroughly integrated.

The weakest points, to a mental-hygiene reader, will seem the failure to recognize mental hygiene as a point of view coördinate with the others. Psychoanalysis, behaviorism, and the *Gestalt* psychology are also passed over rather cavalierly, yet the book shows their influence in certain attitudes and concessions. Scattered through the work one finds more or less recognition of important points in psychology and psychiatry.

The attitude toward intelligence tests, racial differences, heredity, environment, and eugenics is, in general, very discriminating. Yet it lacks the point of view of Boas' school of anthropology when the author denies worth-while cultural achievements to the black, brown, and red "races". He says that one's career is largely determined in the chromosomes, and cites Aaron Burr *against* the soundness of the eugenic interpretation of the Edwards stock!

Leighton shows no "psychiatric" insight into the escape, defense, or security value of every faith or philosophy, whether Calvinistic or Jungian, æsthetic or ethical. The difference is largely in the basis of safety—the "individual" or the "social order".

The psychological (or psychiatric!) roots of persecution and conscientious objection are, after all, the same.

Ethical and religious dualism has its counterpart, both cause and effect, in the divided self. Conscience is a complex. Leighton does not say that, but he traces dualism in its several forms—Zoroastrian, Socratic, Manichæan, Gnostic, Augustinian, Aquinian, Lutheran, Puritan—down to the "Ideal Self" or "Inmate" of Adam Smith. There is not a little of this dualism left in his own philosophy. Indeed, it is not easy to conceive of ethics without it.

Freedom is a habit of choosing "right". Moral freedom and individual responsibility are admitted to be very narrowly limited, but are none the less essential to the ethical life. This still free force he calls "rational intelligence". The author does not quite face the possibility that a behavioristic ethics might turn out to belong exclusively to the departments of sociology and psychology.

An argument against a theory based upon the dire results of its acceptance is never very convincing. This weakness characterizes Leighton's attacks upon mechanistic materialism, religious positivism, and the like.

Our author pays his disrespects to the cult of "living biologically"—unless adjustment to an unseen environment be included. Mere survival is no test or sanction of morality. But, if impulses be neither good nor bad, whence comes the "godlike" in man's nature? The moral is cultural in origin. Is God also cultural? Why not? Ethics do not arise in "pre-logical" or tribal mentality, nor until culture permits reflection and individuation. If both the individuals and the social order are cultural in origin, why not also their compensatory beliefs?

The anthropologists—especially those who insist on cultural continuity and diffusion—are facing essentially this same paradox in their problem of tracing the sources of cultural change in the reaction of individuals upon the culture that produced them. To paraphrase the axiom attributed to Harvey, shall it be, "*Omnis cultura ex cultura*", or, "*Omnis cultura ex individuo*"?

The treatment of instinct is labored, but not satisfactory. Leighton offers "capacities" as a category that avoids the too specific implications of animal instincts. But certain examples offered as true instincts seem also rather to be "capacities".

The self is recognized as a unifying dynamic principle of which

the essence is *feeling*. As between pleasure and self-realization as *supremum bonum*, our author seems to lean against hedonism. Utilitarians themselves did not, however, rank all pleasures alike. They assumed *taste*, and they recognized *functioning* as basic to satisfaction. The self-realizationists were capable of being narrow individualists, but self-realization turns out to require not only a functional unification of wishes in the self, but "higher" and more complex integrations of a social order.

All choices imply inhibitions, and inhibition is self-sacrifice, or is so considered. Self-realization and salvation are to be had only through community, but not through community only. Identification with a common ideal requires self-limitation. (This is *the* characteristic human trait according to Ghandi, whose contributions, with Tolstoi's, are surprisingly ignored in this book.) Ultimately, Leighton still finds another world necessary to balance the inadequacies of this one, or of his own philosophy of this one.

After all, the objective of social living seems to be to secure opportunity for each to work out and organize, harmlessly and harmoniously and interestingly, an inner world in compensatory equilibrium with the outer.

THOMAS D. ELIOT.

Northwestern University.

UNDERSTANDING OURSELVES; THE FINE ART OF HAPPINESS. By Harold Dearden. New York: Boni and Liveright, 1926. 369 p.

In the words of its author, "this book is primarily and above all else an effort to provide the material for preventive treatment as applied to the mind and nervous system. . . . to put at the disposal of every intelligent reader the essence of the knowledge upon which is based the modern treatment of nervous and mental disorders, in the belief that a general spread of such knowledge is essential if the public is to coöperate intelligently in any preventive system intended for the good of the community as a whole." The book includes a well written preface; a Part I of twenty-five chapters, dealing with the nature and problems of the mind; and a Part II of seven chapters, devoted to sex problems. Throughout, treatment suggestions are intermittently interjected, based largely upon "common sense and the practical application of such methods of psychological training as are available nowadays".

Written in a chatty and entertaining style, with many anecdotes and illustrations drawn from everyday life, the book makes very easy reading. Not to have read it need not embarrass any one.

H. CHAMBERLAIN.

Minneapolis Child Guidance Clinic.

NEW YORK AT SCHOOL. By Josephine Chase. New York: Public Education Association of New York City, 1927. 268 p.

In the foreword to *New York at School*, Mr. Howard W. Nudd, Director of the Public Education Association, states: "This story of *New York at School* has been designed to further the purpose of the Public Education Association to inform its members and citizens generally of the work of the city schools. For years, the association has discussed various educational questions of current interest in its bulletins and in articles in the public press. This is the first time, however, that an effort has been made to present a comprehensive picture of the school system as a whole, in order that the average citizen might see its numerous activities in relation to one another."

A careful reading of Josephine Chase's work will convince one that she has admirably realized the purposes thus set forth by Mr. Nudd. She has produced not merely a factual description and analysis of the activities and functions of the New York educational system, but a very human and penetrating account of its accomplishments and its needs.

The book is divided into seven sections. The first, *Regular Paths of School Progress*, relates to the work of the kindergartens, elementary schools, junior high schools, high schools, and vocational schools. Section II treats of such general services as health and physical education, character education, visiting teachers, school lunches. Section III takes up the services afforded physically handicapped children, ungraded classes, and such special facilities for dealing with problem children as probationary, adjustment, detention, and parental schools. Section IV deals with vacation, continuation, and evening schools, adult education, and extension services through lectures, meetings, and forums, recreational facilities, and so forth. Section V describes the functions and methods employed by the Bureau of Attendance, and Section VI the training, the selection, and examination and promotion of the teachers. Finally, Section VII discusses the general administration of the schools.

In this herculean attempt to picture the essential features of a school system that is responsible for the education of 1,000,000 children, the author succeeds marvelously in keeping her sense of direction. She enables us to appreciate the complexity of the system, the variety of problems that press for solution, and the extent to which the principles of variation and uniformity are carried out. The reader is impressed with the thoughtfulness and care exercised by the administrative authorities in providing for the needs of all types of children. Thus, if he be a layman, he is surprised to learn of the careful attention devoted to handicapped children, the pro-

vision of such facilities as special classes, clinics, and employment and placement bureaus designed to educate and equip these children to lead natural and independent lives. He reads of the thoughtful provision made for continuing the education of such children in spite of their handicaps. In the New York Orthopedic Hospital, for example, "there are six classes for crippled children. One teacher spends her entire time teaching at the bedside of children who are unable to attend classes." There are 1,983 pupils "in institutional classes, and 104 who are transported to high school classes, in addition to more than 300 who are receiving school instruction at home because none of the transportation and guide systems the schools provide make it possible for them to attend."

On the other hand, the limitations and inadequacies of the schools are not glossed over. It is pointed out that the staff assigned to the supervision of 1,079 kindergarten classes (one director and two assistant directors) is of the same size as "it was at the time of the consolidation of the five boroughs in the '90's, when there were only 89 classes". The author remarks of the elementary schools: "The fact that one district superintendent—in districts 26 and 27 Brooklyn—presides over 65,000 pupils and 1,500 teachers suggests the temptation to over-standardize the schools", and she portrays the diverse conditions that demand provision for individual differences, such as differences in race, location, abilities of pupils, and the like.

In short, we have here an excellent outline and survey of the activities and responsibilities of the New York City school system; a survey that presents at once the essential facts required to secure a comprehensive grasp of its general character and to appreciate the chief directions in which energy must be turned for purposes of modification and development.

V. T. THAYER.

Ohio State University.

NOTES AND COMMENTS

Colorado

Chapter 78, Laws of 1927, gives to the Colorado Board of Corrections the power to transfer temporarily to the state psychopathic hospital, or to the state hospital, any prisoner at the state reformatory who shall become insane.

Chapter 90, Laws of 1927, provides that when insanity is pleaded as a defense in criminal cases, the judge shall commit the defendant to the Colorado Psychopathic Hospital or to the state hospital, where the defendant shall remain under observation for such time as the court may direct, not exceeding one month. The law further states: "The judge may also appoint a commission of one or more physicians, specialists in mental diseases, to examine the defendant during said period, and the court may call and examine said physicians as witnesses at the trial. Either the state or the defendant or both may call said physician or physicians as witnesses, but this shall not preclude the state or defendant from using other physicians."

This law provides for three types of plea—"not guilty by reason of insanity at the time of the alleged commission of the crime", or "not guilty by reason of insanity since the time of the alleged commission of the crime", or "not guilty by reason of insanity at the time of the alleged commission of the crime and since". The procedure for each of these three pleas is set forth in the following paragraphs:

"If the plea is 'not guilty by reason of insanity since the time of the alleged commission of the crime', the case shall be set down for trial on the issue of insanity alone, with no reference to the crime. If the plea be 'not guilty by reason of insanity at the time of the alleged commission of the crime', or 'not guilty by reason of insanity at the time of the alleged commission of the crime and since', after the period of observation, the case, in the discretion of the court, may be either set for trial on the insanity issue alone and the defendant committed to the Colorado State Hospital at Pueblo or held for trial, dependent on the verdict of the jury, or be tried on the main case.

"If the plea is 'not guilty by reason of insanity at the time of the alleged commission of the crime', or 'not guilty by reason of insanity at the time of the alleged commission of the crime and since', in addition to the other forms of verdict, the jury shall be given a form

with the words 'not guilty by reason of insanity'. If said verdict is rendered, the defendant shall be confined in the Colorado State Hospital at Pueblo under the laws governing that institution."

Maine

The name of the State Board of Charities and Corrections has been changed by law to the Department of Public Welfare.

Chapter 87, Laws of 1927, amending an act relating to compulsory school attendance, provides that a child between the ages of fourteen and sixteen who, because of subnormal mental capacity, is unable to pass the tests necessary to allow a regular work permit to be issued, may, under conditions deemed proper, receive a work permit, issued jointly by the commissioner of education and the commissioner of labor. Such children must not be employed in hazardous occupations.

Chapter 137, Laws of 1927, relating to the employment of children, contains the same provision.

Michigan

An act of the 1927 legislature requires drivers of motor vehicles used for the conveyance of passengers for hire to have a health certificate. Applicants for such certificates must satisfactorily pass a physical examination. No certificate will be issued to any applicant whose vision is less than 50 per cent normal in each eye and whose hearing is less than 75 per cent normal, and unless he is free from clinical and laboratory signs or tests of syphilis and any other diseases of the nervous system, and from any communicable disease dangerous to public health. The state commissioner of health shall designate registered physicians in each county to make physical examinations of applicants for drivers' certificates. The physicians' reports of these examinations must be made out on blank forms furnished by the state commissioner of health, which must be forwarded immediately to the office of the state commissioner of health. If it appears from the report that the applicant possesses satisfactory vision and hearing and is free from disease as provided in the act, the commissioner of health issues to such applicant a certificate to drive passengers for hire for a period not exceeding two years.

Wisconsin

Chapter 340, Laws of 1927, relating to the placement of children of the state public school, contains the following new provision:

"A child of a feeble-minded parent or of a parent who has suffered

from a nervous or mental disease that is likely to be repeated in the child, or a child who is suffering from congenital syphilis or any other disease that may cripple such child, may be placed in a home if a commission, composed of a physician and alienist connected with the psychiatric field service of the board of control, an alienist designated by the Wisconsin psychiatric institute, and the superintendent of the state public school, shall find that such child can be safely placed in a home. No such placement shall be made without advising the persons with whom the child is to be placed of the physical condition or the mental background of such child. Such child shall not be placed for indenture or adoption, but may be placed upon such terms as are prescribed by the board of control."

Chapter 178, Laws of 1927, changes the names of the Wisconsin Home for the Feeble-minded and the Southern Wisconsin Home for the Feeble-minded to *Northern Wisconsin Colony and Training School* and *Southern Wisconsin Colony and Training School*, respectively. The same act, relating to commitment to and discharge from these colonies, employs the term "mentally deficient" wherever "feeble-minded" was used in the act that it supersedes.

ANNUAL MEETING OF THE NATIONAL COMMITTEE FOR MENTAL HYGIENE

The eighteenth annual meeting of The National Committee for Mental Hygiene was held at the Hotel Pennsylvania, New York City, on November 10. At the luncheon that preceded it, which was attended by over three hundred members and guests of the Committee, Doctor Harry Emerson Fosdick, pastor of the Park Avenue Baptist Church, was the guest of honor and principal speaker, his subject being the relation between mental hygiene and religion. A number of five-minute speeches were made also, on the following subjects: *The National Committee for Mental Hygiene*, by Dr. Frankwood E. Williams, Medical Director of the National Committee; *Child Guidance*, by Dr. Lawson G. Lowrey, Director of the Child Guidance Institute, New York City; *College Mental Hygiene*, by Dr. Arthur H. Ruggles, Superintendent of Butler Hospital, Providence, Rhode Island, and Chairman of the Executive Committee of the National Committee; *Mental Deficiency*, by Dr. George L. Wallace, Superintendent of the Wrentham State School, Wrentham, Massachusetts; *Criminology*, by Dr. William A. White, Superintendent of St. Elizabeths Hospital, Washington, D. C.; *Mental Disease as a Social Problem*, by Dr. C. Floyd Haviland, Superintendent of the Manhattan State Hospital, New York City; and *Plans for the First International Congress of Mental Hygiene*, by Clifford W. Beers, Secretary of the National Committee.

After the luncheon a memorial meeting was held in honor of the late Dr. Thomas W. Salmon, Medical Director of the National Committee from 1912 to 1922, and the late Dr. Walter B. James, who was president of the committee from 1919 to 1923.

The outgoing officers were all reelected for the coming year and Dr. William L. Russell was elected as an additional vice-president. The officers at present are: President, Dr. Charles P. Emerson; Honorary President, Dr. William H. Welch; Vice-Presidents, James R. Angell, Rt. Rev. William Lawrence, D.D., Dr. William L. Russell, and Dr. Bernard Sachs; Treasurer, Frederic W. Allen; Secretary, Clifford W. Beers.

THE BEHAVIORIST'S PRAYER

Reprinted from the *Psychological Bulletin*, September, 1927

Thou Cosmic Movement Continuum! we petition thee to lend auditory discriminations to these our laryngeal contractions. Lower the threshold of thy sensory discriminations so that our neuromuscular-glandular activities do not expend themselves as wasted reflexes. May the alterations in the configurations of our pitifully finite electron-proton aggregates find sympathetic resonance in thy visual receptors.

May the threefold division of our receptor-conductor-effector mechanisms receive to the full the beneficence of thy cosmic bounty. Bathe our receptors in thy irradiations of energy-flux, so that our cerebro-spinal neurones are ever dynamogenic. May our cortical pathways always keep vigilance over our lower reflexes. And we humbly ask thee that our endocrines may not hypertrophy, or that our hormones become toxic. Preserve us, we pray, so that through all our energy transformation and relative motions our configurations remain symmetrical.

Also, amative Movement Continuum, may we never hang suspended in delayed reactions; and may the reciprocal innervation of antagonistic muscles never equilibrate itself so that circular reaction arcs are elicited, or too much dammed up energy accumulate. May we likewise not suffer too many inhibitions or repressions.

Again we implore thee, O Sum Total of Electron-Protons, that our inspiration-expiration ratio may ever be harmonious with our subvocal speech. Increase our opsonic index; accelerate our reaction time; and thus may we approximate perfect obedience to the energetic imperative. And though we walk through the valley of the shadow of depressed metabolism, may we secrete no useless adrenalin.

Give us this day our customary calories; forgive us our maladjustments as we overlook other loci their inadequate movements. And

finally when the negative accelerations of each configuration of movements brings on senescence, and the second law of thermo-dynamics triumphs over our biochemical reactions, we pray, O Omnipotent, Omnipresent, and Omniscient Cosmic Movement Continuum, that thou wilt receive each and every locus back into thy primordial Space-Time Bosom.

This we implore in the name of Science!

AMEN.

OLIVER L. REISER.

University of Pittsburgh

VOCATIONAL GUIDANCE AT COLGATE UNIVERSITY

Vocational guidance at Colgate University was placed on a serious basis for the first time during the college year 1927-28. As a result of this, Dr. G. H. Estabrooks, associate professor of psychology, is now doing half-time research in vocational guidance, and is supplied with a full-time secretary. In addition, the placement bureau has two seniors, who are taking Professor Laird's course in experimental psychology, who give three hours a day three times a week to research work. There is also a freshman assistant who puts in an average of three hours a day per week.

It will be seen from this that the situation is very favorable for work of this nature. The actual work falls roughly into two broad groups. The first of these consists in consulting with the men of the senior class as to their vocational future and interviewing all freshmen. The experimental work proper makes up the second group.

With reference to group number one, the director of the placement bureau is making it a point to interview all members of the senior class before the end of the semester in order that he may be able to have their problems well in hand and to realize the material available before the actual work of placement begins in the spring. He also hopes to interview every member of the freshman class before the end of the semester. Next term also the work will be concentrated upon the freshmen and the seniors. This program rather overlooks the sophomores and juniors. The attitude is that, while in the case of the seniors there is a practical problem which cannot be overlooked and which must be met as best it can, the real opportunity for actual and scientific vocational guidance presents itself in the freshman class. With this end in view, the head of the office will endeavor to have intimate interviews with every freshman who is at all doubtful about his vocational future and will attempt to make the work in this field as scientific as possible, hoping that by the end of the freshman year it will be possible to give them some definite assistance with their problems.

All men interviewed are given Strong's vocational-interest blank

to fill out; and in the case of the seniors, the interviewer does his best to size up the situation and, in view of all the facts that he can lay his hands on, to advise them as to what he considers should be their proper vocational future. This is really rather unscientific work, since it consists merely in interviews and the application of common sense to the problems that arise therefrom. It is hoped that Strong's vocational-interest blank may be of some use. At present, however, the scoring scales for the revised blank are not available, and it will probably be some time in January before serious work along these lines can be begun.

As to the work of a more experimental nature, one of the assistants from the course in experimental psychology has taken in hand the task of attempting to work out norms for Strong's vocational-interest blank on various trade groups in the cities of Utica and Syracuse. Working through union headquarters there, he expects to be able to get groups of from forty to fifty men from such trades as carpenters, painters, plumbers, and so forth, and to work out norms on this basis. This work is undertaken at the suggestion of Professor E. K. Strong. The other assistant is working on the relation between introversion and various vocational choices, using Professor Laird's personal inventory C-2. He is carrying through three pieces of research work, the first dealing with the relation between introversion and vocational choice among the freshmen in the college and certain groups of alumni. The second consists of obtaining the introvert scores of two groups, fifty in each, taken from the engineering and ministerial professions. The object of this is to see if there is any difference in introvert tendencies between engineers and ministers, the two groups being chosen on the basis of their supposed radical differences. The third piece of work is an attempt to discover the relation between introvert scores and preference for school subjects among the freshman class. This preference is determined by their choices on Strong's vocational-interest blank. In addition to this work, the office is also doing its best to get in touch with the alumni body and is working in close coöperation with the alumni office. The idea is to discover by personal touch with the alumni the professions in which Colgate alumni seem to fit best and in which there are ample opportunities both for employment and for advancement after employment has been secured.

The work in vocational guidance is carried on by the director himself. The experimental work is left almost entirely to the two assistants, who are carrying it out in very fine fashion indeed. On the whole, the set-up for vocational guidance at Colgate is well-nigh ideal, since it has the hearty coöperation of the president of the institution as well as of the psychological department.

GOVERNOR SMITH—PENOLOGIST

Editorial, *The Nation*, December 21, 1927

Great fluttering and raucous cries from the nests of the eagles of the daily press—Governor Smith has laid impious hands on the sacred robe of Justice! He has had the temerity to suggest that there might be a better way of determining the penalty to be imposed on a convicted felon than to leave it to the puzzled discretion, the whim, or the caprice of the trial judge. He proposes that the state crime commission should take a year to study the question, and he wonders if it would not be better to confine the court to its primary function of trying the question of the guilt or innocence of the accused and to set up a separate tribunal, a board composed of well-paid experts—psychiatrists, physicians, lawyers, etc.—to make a careful study of the convicted offender and, upon the basis of the knowledge so gained, to determine what should be done with him. In order that this study may be made with the requisite thoroughness, the governor suggests the establishment of a clearing-house to which the convict shall in the first instance be committed and where he shall be kept under close observation until all the facts relative to his mental condition and his criminal propensities have been established. Upon this diagnosis the board will then commit him to the type of institution and for such length of time as the public interest shall seem to require.

"Fantastic", "futuristic", "revolutionary" are some of the terms employed by the startled editors to characterize the governor's bold conception. One editor describes it as a proposal to "turn our criminal administration upside down"; another begs to remind us that "Albany is not the capital of Utopia". These critics were probably unaware that Governor Smith's proposal is in line with the main current of criminological thought ever since Beccaria, 164 years ago, demanded that the judges should be deprived of the arbitrary power of determining the kind and amount of suffering that should be inflicted on the convicted felon. Let us hope that, in the course of the year that Governor Smith has wisely allowed for the study of the question, these leaders of public opinion will have led the public to agree with the governor's view that his plan provides "a sensible, modern, up-to-date way of treating criminals".

The proposed plan is neither novel nor revolutionary. "It would deprive judges of the power to sentence persons convicted of felonies", exclaims the horrified editor of the *Times*. This sounds pretty awful until we recall how little is left of this venerated judicial power. Our legislatures are forever curbing it by prescribing and changing maximum and minimum sentences below and beyond which the judges are forbidden to go. Much of the legislative activity of the last two years

in this country has gone into the enactment of mandatory penal statutes whose sole object has been to restrict still further the sacred prerogative of the courts in sentencing persons convicted of felony.

It is in connection with the indeterminate sentence (and in some of our states all sentences to state prison are indeterminate) that we have become familiar with the practice of having a non-judicial body—usually the prison board; sometimes, as in New York, a board of parole—invested with the function of determining the actual duration of the sentence. In several of the Western states, notably in California, the court has practically ceased to function as a sentencing agency. The legislature fixes the maximum and the minimum limits of the sentence to be served for a given crime. The jury finds the culprit guilty of that crime, the judge commits the convict to prison, and the prison board, after a study of the prisoner, determines the sentence to be served. This has now been going on for many years, and the skies of California still bend lovingly over her amiable sons and daughters and her temples of justice still stand.

Now, what Governor Smith proposes is, in effect, to provide a thoroughly competent study of every person committed to a state prison before a decision is reached as to the disposition to be made of him. The survey of prison inmates made by the Sing Sing psychiatric clinic in the years 1916–1918 disclosed the appalling fact that, mingled indiscriminately in the prison population of, say, 1,500 men, there were not less than 180 who were definitely insane, 260 irresponsible psychopaths, and more than 400 feeble-minded. The courts had neither the specialized knowledge nor the facilities to ascertain these facts. These wretched creatures were all thrown promiscuously into the same human ant-heap together with some 700 men of normal mental faculties. Is it too much to say that under any decent, not to say humane, system of criminal administration, these unhappy and incongruous elements of the prison population would be weeded out and committed to institutions adapted to their care and treatment? (The splendid hospital erected a few years ago at Sing Sing Prison was built as the first step in the development of such a clearing-house as Governor Smith suggests.) Perhaps, before our year of grace is up, we shall all give thanks to a just, but merciful God for a governor who refuses to tolerate the chaos in criminal administration which we have so shamefully endured.

PENITENTIARY REFORMS IN BELGIUM

The Belgian correspondent of the *Journal of the American Medical Association* reports as follows on some phases of the penitentiary reforms in Belgium as discussed in a recent address by Dr. Jeanne Beeckman, physician of the Service d'anthropologie pénitentiaire:

"The reforms in Belgium contemplate the individualization of penalties, the seriation of persons sentenced, the substitution (at least, for certain categories of criminals) of the idea of social defense for that of suppression purely punitive, the moral and social reëducation of the prisoners (holding out to them the hope of winning a new place in society), and, as a corollary, the elimination of the abnormal and of those who are socially inadaptable. Any international action in the field of penitentiary administration must be considered from a triple point of view: the best interests of the prisoners, the scientific interest, and the interest of social defense, properly understood, against those socially inadaptable."

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